ABSTRACTS OF THE

Lumleian Lectures

ON THE

ELECTRICAL CONDITIONS OF THE HUMAN BODY.

By WILLIAM H. STONE, M.A., F.R.C.P.

LECTURE III.

DR. STONE said that in the second lecture he had shown the effects of polarisation which occur in all electrolytes and in the human body to an extent not previously measured, as far as he knew. The important bearing of polarisation on electrotonos was also discussed. He had to make two corrections. In the skeleton form of Mance's method a minus was omitted between the two terms of the numerator A – B. This he believed led him to describe the formula as one of multiplication. "The product divided by the sum" was so familiar to electrical workers that the mistake was natural. The method really used was the difference of the compound quantities designated A or B divided by that called C. Dr. Ord also suggested that he had not made the demonstration of the two sounds in the induction discharge quite clear on the telephone. This experiment was therefore repeated in another way.

Coming to the subject of the third lecture proper, Dr. Stone said the account of induced currents was in every text-book. Induced currents are momentary, occur at make and break; the current in the primary coil induces also an extra current in the opposite direction, which therefore weakens the effect of make, whereas on breaking the opposite effect takes place. Induced currents came early into physiological and therapeutical use because of their obvious effect on the sensory nerves, of their action on muscle as a stimulant, and on account of the remarkable work done by Duchenne. Duchenne used a clumsy and primitive induction coil, though he accomplished a vast amount of work, and isolated several new nervous diseases, by testing the reactions of muscles to stimulants. But his coil was merely a convenient stimulus—it had no electrical value. For testing the contractility of muscle it is still unequalled. It is also most valuable as a means of keeping up the irritability of muscle which has been damaged by the metallic impregnation of lead, or from which, by nerve injury or more deep-seated lesion, motor nerve influence has been cut off. This induction coil is really a muscle stimulant, and very little more. It may also be used, though with more caution, to test sensation. Here, however, individual differences of temperament step in, the tolerance to induced currents being extremely various in different persons. At fairs and market gatherings the "try your strength" devotees of electricity merely test the individual's capacity to stand a particular amount of induced current. This form of electricity may do good service in stimulating ever so deep-seated a muscle as the diaphragm in asphyxia or suspended animation. In the lecture-room, too, it is most convenient and effective for physiological demonstration. But here its use should end. At present, as a means of physiological research, it is unsafe. The lecturer much regretted that some recent researches as to localisation of cerebral function had been founded on the use of induction currents. There is not only no proof that the current passes through the region included between the poles, but there is conclusive reason to believe that it diffuses itself widely and irregularly in all directions, with enormous differences of density. Further, it is doubtful if it ever traverses a moist substance like brain tissue at all, or only starts a series of laminated polarities something like a condenser. In a feeble conductor a polarised state is set up which is the very reverse of transmission of current. There are, however, two very different kinds: induced and alternating currents. The latter obtained from a commutator and battery are the best. It has been asserted in a medical journal that it is impossible to measure induced currents. But this is not true. They may be measured by three methods: (1) Kohlrausch's dynamometer, in which the moving needle of the galvanometer is replaced by a moving coil; (2) Dr. Stone's instrument with a very light aluminium coil, this metal being the largest known conductor of electricity; and (3) A modification of this, a simpler form, in which two sheets of ordinary very soft annealed iron are employed; they rapidly change their polarity, and may be regarded as part and parcel of the circuit going to them. He believed that this would prove the dynamometer of the future for medical purposes. The induced currents could also be measured by the quadrant electrometer with which Professor Stocker and Mr. Gregory had made determinations. The lecturer next showed Kohlrausch's combined induction coil and meter bridge, with telephones used as galvanometers. He showed that with induced currents the resistance came out different from that obtained by the constant current, being about one-half to two-thirds of that observed with the latter. Thus the resistance of the St. Thomas's Hospital porter was found to be 600 ohms as compared with the 1160 of the constant current. The telephone became silent when 600 ohms had been introduced to balance the resistance given by the porter. Now this, though it renders this elegant method untrustworthy for the measurement of resistance, is a physiological fact of considerable importance. It is susceptible of several explanations: 1. The human body, like all imperfect conductors, is really probably more permeable to high tension than to low tension currents. Indeed, Dr. Stone considered that his experiments fairly demonstrated this. 2. It is probable that, with rapid intermission, the current does not really pass at all, or not fully until it is annulled by the next current in the opposite direction. The human body under the circumstances would be like the leaves of a book in a stratified or laminated state; or, more closely, like an elastic body transmitting the waves of sound, with alternate phases of condensation and rarefaction, represented in this case by positive and negative polarities. The same argument was illustrated by the early experiments of Du Moncel. 3. An alternating current ought to show too low a resistance, as Dr. Oliver Lodge has suggested to Dr. Stone, because of its electrochemical capacity, which it would treat like conductivity. If we were to measure the resistance of a perfect condenser it would not come out infinite, even if the insulation were perfect. The second and third headings of explanations gave Dr. Stone grounds for believing that the body had a condenser action. 4. There is probably considerable self-induction. The possibility of this playing a part was brought out very strongly before the lecturer by Professor Hughes's highly suggestive paper read before a meeting of the Society of Telegraph Engineers.[1] There is still some controversy as to the mathematical interpretation of his facts, but the lecturer himself believed that in the main the facts point to a new direction of research which may be utilised by physiologists. Mr. Hughes divides the current into stable and variable periods. The continuous current is stable; the alternated or interrupted, variable. It is with the latter that induction takes place. Instead of the time-honoured hammer of the induction coil, Professor Hughes employs his own invention, the microphone, or, better, a small contact-breaking clock. This enables the ordinary meter bridge to be used for measuring resistance. [A successful experiment was then made with the hospital porter.] Or this method may be combined with Professor Hughes's sonometer. Dr. Stone showed a simpler form in which the induction coil slides along a bar. [Another successful experiment was here performed.] If these coils be set up at measured distances, and an interrupted current passed through the primary coil, the living human body, and a known resistance in the secondary circuit, on either side of the telephone good measures can be obtained. It is a question of balance; when the currents in the two circuits are exactly equal the telephone is silenced. By this means the resistance in the human body can be measured. But there is a still further modification of the instrument which Dr. Stone exhibited and explained, though he had not yet had the opportunity of taking any measurements therewith. This modification is also due to Professor Hughes, and is a most ingenious combination of the meter bridge with the sonometer. By its aid the lecturer hoped to balance resistance in the body and self-induction of the body independently; up to the present, however, no certain results had been obtained.

General considerations.—There is a vast field open for

[1] Electrician, Feb. 5th, 1886, p. 127.

research; indeed, the whole basis of physiological electricity requires strengthening and re-examining. It is a stately building of which the foundations are unsafe, and until these are made firm the whole superstructure is in danger. If, on the other hand, it be done, we shall in the course of the necessary explorations come on many precious discoveries. Already the analogies between nerve force and this great physical force are becoming strong. One such on Inhibition was published in *Nature* by Dr. Lauder Brunton. There were many analogies also between the duplex submarine cable and nerves; the indications in both were made at the far end, and nothing occurred at the near end. Dr. Stone urged that nature must have worked on one plan. He was disposed to believe that there was a real analogy between the cable and the nervous system. Many were the hopeful directions for electrical work—its therapeutic use in muscular enfeeblement, lead paralysis, cases of neuralgia, locomotor ataxy, and progressive muscular atrophy. He believed, also, it proved of service in loosening chemical compounds administered by the mouth; the metals were set free from their salts—mercury, arsenic, zinc, and silver. It possessed also a decided eliminative action; he himself had collected three milligrammes of copper from the urine of one patient. Colonel Bolton, a well-known and trustworthy advocate of electricity in therapeutics, also regarded it as a hypnotic; whilst, again, its influence on the vaso-motor system was amongst its most well-known effects.

Clinical Lectures
ON
DISEASES OF THE EYE.

Delivered at the Nottingham and Midland Eye Infirmary.

By CHARLES BELL TAYLOR, M.D., F.R.C.S.,
SURGEON TO THE INFIRMARY.

LECTURE II.

GENTLEMEN,—The female patient you have just seen is sixty-five years of age, blind from cataract in both eyes, and exceedingly deaf. The male patient is a labouring man, toil-worn, weather-beaten, and seventy-five years of age. He has been blind some months from cataract in the left eye, and the right is dim, although he can still see to go about with it. I saw these patients for the first time this evening, and propose to operate at once, using artificial light; before doing so, however, permit me to comment upon several questions which have arisen in connexion with these and other similar cases.

What is cataract? Cataract is an opacity of the lens. How is it that so many aged persons suffer from cataract? Well, I suppose we must look upon cataract in aged persons as one of the natural phenomena of life—the culminating point in that process of hardening, shrinking, and degeneration which the lens undergoes in common with other tissues as we grow older, and which seems natural to us all. When, for example, an average individual attains the age of forty and upwards, he requires glasses. Why is this? Simply because the lens has become too hard to fulfil its usual function in the process of accommodation for near objects. As time passes on, this—shall I call it natural sclerosis?—increases, until in certain cases the normal relationship of the lens fibres is so changed that it becomes opaque; the patient cannot see, and the surgeon cannot illuminate the fundus of the eyeball: that is cataract. The lens has become opaque, and, so far from assisting vision, constitutes an actual obstruction to the passage of the rays of light. Would it be possible to restore the transparency of the lens? What a momentous question! As well ask would it be possible to restore youth. And yet there is no doubt that by judicious treatment the progress of senile cataract may be retarded. I have seen benefit from electricity, and quite marvellous results, in certain cases caused by accident, or complicated with gout, diabetes, and albuminuria. In both these patients, however, the lens is quite opaque—the cataract is fully formed. There is no possibility of any clearing up. The obstruction must be removed, and this can only be done by operation. What operation shall we perform? Will any surgical procedure short of actual removal of the lens from the organism—that is extraction, as it is called—suffice? I fear not. If we attempted in either of these cases to disintegrate, macerate, and dissolve the lens *in situ* by repeated needle operations, we should in all probability only excite iritis, to which aged persons are especially liable. Very likely the inflammation would prove uncontrollable, and we should be driven to extract at last under far more unfavourable conditions than exist at present. Would it be wise, in obedience to the ancient precept, "Squamam in oculis emovendam potius quam extrahendam," to attempt to depress the lens, dislodge it from the axis of vision, and thus permit the reproduction of images upon the retina? I do not think so. The lens is apt to rise again, or act with all the pernicious influence of a foreign body in the vitreous chamber; so that, although I am not at all disposed to deny that such an operation may be occasionally successful, the risk is too great, and I should not dream of attempting it in either of these cases.[1]

It is clear, therefore, gentlemen, that our only resource is extraction. What is the best method of performing extraction? In order that you may appreciate this question it will be necessary to glance at the history of the operation, which may be said to have commenced in 1752, for although, as the quotation from Pliny just cited proves, there can be no doubt that a method of extraction was known to the ancients, it was not until that date, when Daviel presented his classic memoir to the French Academy, "Sur une nouvelle Méthode de guérir la Cataract par l'Extraction," that the actual removal of the lens from the eyeball assumed its proper place as a recognised operation in contemporary surgery. Daviel operated while seated himself and facing his patient, who also occupied a chair on a lower level. He used a lance-shaped knife, and incised the lower half of the circumference of the cornea, delivering the lens through the natural pupil. When successful, the flap operation, as it is called, left nothing to be desired; but fifteen eyes in a hundred were irrevocably lost, and twenty more so damaged that it is a matter for special wonder that no serious attempt at improvement was made until 1860, when Herr von Graefe, the celebrated professor of Berlin, announced, as the result of the daily examination of eyes recently operated on, that the part of the eyeball which took the initiative in the destructive inflammatory process was the portion of iris contused during the exit of the lens, and that this stretching and bruising was consequently the *teterrima causa* of subsequent disaster and loss of sight. Acting on this hint, Mooren, of Dusseldorf, excised the piece of iris corresponding to the flap some weeks before extracting; and Schufte, at that time Von Graefe's assistant, seeing the small proportion of eyes lost after iridectomy—about one in five hundred—simply performed that operation in the ordinary way, and then scooped out the lens with a spoon. Shortly afterwards Graefe published his famous memoir on linear extraction, placing the wound in the plane of the lens entirely outside the cornea. Jacobson, of Kœnigsberg, and Pagenstecher, of Wiesbaden, followed with similar sclerotic incisions both upwards and downwards, the latter removing the lens with its capsule entire by means of a large spoon. I visited Graefe's, Pagenstecher's, and Mooren's cliniques at this time in order to study their various methods of operating, and, after careful investigation of the whole subject, arrived at the conclusion that Schufte's incision in the corneal margin was the best, and that it needed but to be slightly enlarged in order to enable us to extract the lens without the objectionable scoop or the use of any traction instrument whatever. After operating in this way with most brilliant success upon a number of cases with an incision combined with an iridectomy, and comprising only one-third of the upper segment of the cornea, I published an account of the procedure in the *Ophthalmic Review* and *Edinburgh Medical Journal*, and it has since been universally adopted as the operation *par excellence* for cataract by ophthalmic surgeons both at home and abroad. They call it a "modified Graefe," but it is really the operation I described

[1] In illustration of the occasional success attending depression, I may remark that some years ago I extracted cataracts from both eyes for an eminent practitioner of medicine, who had so successfully operated by couching, as he termed it, upon his own brother (a clergyman) that his patient was able to resume his duties as rector of a large parish.

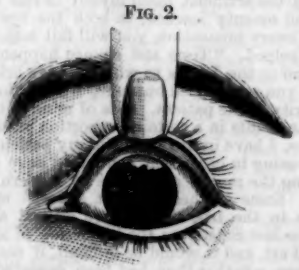
at that time, Graefe's original method having been so completely abandoned that it is now popularly said that nothing remains of it but the knife. I have also endeavoured in certain cases to preserve the pupil, while securing at the same time the advantages of an iridectomy, by excising only the periphery of the iris, leaving the sphincter untouched and free in the anterior chamber—an operation which possesses many advantages both optical and æsthetic, but which is rather difficult to perform. I have here a patient, a lady seventy-five years of age, on whom I operated last week in this way. When the upper lid is in its natural position, the eye, as you see, looks perfect (see Fig. 1); but when the lid is raised the coloboma in the periphery of the iris is revealed (see Fig. 2).

Let us see now, gentlemen, *en résumé*, what the last twenty years have done for us. Graefe discovers, or thinks he discovers, that the bruised iris is the sole cause of disaster;

FIG. 1.

Mooren cuts the Gordian knot by excising the portion likely to be injured; Schufte follows with iridectomy scoop and small incision; Graefe adopts a linear incision entirely outside the cornea; I propose a small flap in the corneo-sclerotic junction; other distinguished operators place their incision entirely in the cornea. Have we arrived at the *ne plus ultra* of ophthalmic surgery? Must we rest and be thankful, or shall we go back and make a selection from the labours of our distinguished *confrères*, adopting some of their suggestions and rejecting others? Well, it seems clear that modern surgeons are right in abandoning Graefe's linear extraction. The wound is too far back; the danger of prolapse of the vitreous is too great. A vast iridectomy is necessary in order to prevent strangulation of the iris at the angles of the wound. There is great risk of bleeding into the anterior chamber in the early stage of the operation—a most embarrassing complication; and the site of the wound is such as to excite well-grounded fears of sympathetic

FIG. 2.



ophthalmia; moreover, the best results will not bear comparison with those obtainable by flap extraction. The division of the operation into two parts, as in Mooren's method, is so manifestly objectionable, that it is clear that this operation must be reserved for those cases in which it is necessary to perform iridectomy as a preliminary on account of glaucomatous or other complications. The profound anæsthesia insisted upon by Jacobson before operating renders his method too dangerous for general adoption, and the traumatism and frequent loss of vitreous attending the use of Pagenstecher's spoon will preclude its general use. As to Liebreich's, Lebrun's, and Warlomont's modification of Kuchler's transverse incision of the horizontal meridian of the cornea, these operations all, especially when the lower section is adopted, cause a certain amount of subsequent astigmatism, which prevents our obtaining the best visual results; and the operation I have spoken of as my own, though it appears to me as perfect as any combined method can be, involves, like all the rest, a mutilation of the iris, which leaves much to be desired, and, inasmuch as it is not always necessary, will certainly never be adopted to the absolute exclusion of other methods by which the pupil is preserved entire.

We must always aim, gentlemen, at the highest, and the highest indication of success in cataract operations is a central and movable pupil; we may not be able to secure this in every case or even in a very large proportion, but we ought in a certain percentage, and in order to do so we must adopt what the late Mr. Critchett denominated a method of eclecticism. We must enlarge the wound to four millimetres, or more if necessary; we must bring it forward in the cornea, or place it back in the sclerotic junction, according to circumstances. We must select, not our patients, but our operations, and be guided by each step of the operation what the next step shall be. For instance, I have been asked whether I intended to perform iridectomy in either of the cases now before us. Well, I cannot answer that question at present; the reply in each case must depend on the conduct of the patient, the peculiar nature of the affection, and the size and consistence of the cataract as revealed upon the operating table. If either of our patients should prove as indocile and as utterly wanting in self-control as the deaf man on whom some of you saw me operate last week, I shall be compelled to excise a portion of iris in order to prevent prolapse. If, on the contrary, the patient gives evidence of a certain amount of self-control, if the lens escapes readily, if its margin is unbroken, if cortical débris come freely away, if the iris is not unduly stretched during the passage of the lens, if it afterwards falls readily into its place and does not display a tendency to prolapse, we may then reasonably hope to preserve a central and movable pupil. If, however, the lens is delivered with difficulty, if the iris has manifestly been roughly treated, if it is torn, if portions of uvea have been brushed off, if there is a suspicion that particles of lens matter are lurking behind its uncut surface—above all, if it shows a marked tendency to prolapse, we must excise a portion, but always with regret and only to prevent subsequent disaster. You may ask, What advantage do we get by excising a portion of iris? Well, the iridectomy prevents prolapse—that bugbear of the old flap operation; prevents bruising of the iris if done before the operation or before the exit of the lens, and the consequences of bruising if done after; permits more easy exit of the lens through a smaller wound, and also complete evacuation of cortical débris, so apt to be left behind and cause subsequent inflammatory mischief when concealed behind the uncut membrane. On the other hand, when the iris is excised there is more cut surface, more wound exposed to the danger of infection and suppuration. The dissection of iridectomised eyes shows almost invariably adhesions at the angles of the wound, whatever precautions may have been taken to prevent them; the eye is visibly mutilated; and although the sight of a patient with an upward coloboma is good, there are circles of diffusion, and it is not quite as good as that of a patient with a central and movable pupil. We shall therefore be guided by circumstances, and save the iris if we can do so consistently with the security of the patient. We shall now proceed to operation. Before doing so, however, permit me to call your attention to the method of illumination which I always use at this time of year. The light is obtained from an ordinary paraffin lamp, and the rays are concentrated by a lens in the shape of a globe of water—a simple apparatus, which may be used without preparation in any cottage or private house, an ordinary water-bottle held by an assistant sufficing for the lens. (Fig. 3.)

Remarks after operation.—I do not know, gentlemen, whether you are aware of the fact, but statistics tell us that a preponderating fatality has always attended operations for cataract upon the left eye. This is doubtless due to the greater difficulty of operating upon the left eye, a difficulty which I have endeavoured to obviate by using a bent knife, which I devised some years ago, and which you noticed, although the left eye was selected for operation, was, in the case of the male patient, held in the right hand. With this knife I would rather operate upon the left eye than upon the right, since the natural tendency of the eyeball to roll inwards, to be pushed before the knife, is in your favour if the left eye is selected for operation, and against you if the right is the subject of extraction. As those of you who were near enough to see remarked, the iris in this case persistently prolapsed after removal of the lens, and I was therefore compelled to excise a portion for safety's sake. With this excep-

tion the operation was completed without misadventure. In the female patient, the tendency of the iris to fold over the edge of the blade of the knife was, as you noticed, evaded by a *tour de main*, and the wound so managed as to form a small flap situated in the upper segment of the corneo-sclerotic junction; the capsule was then punctured, the lens extruded, and the operation completed, leaving, in this case, a central and circular pupil. I shall speak directly as to the local anæsthetic which was used and the antiseptic precautions which were adopted throughout; before doing so, however, permit me to answer one or two questions which have been addressed to me. I have been asked whether the male patient's great age did not contra-indicate operation? whether the patients would not have been better for some preliminary treatment? and whether it would not have been desirable to have administered some general anæsthetic? I will reply to these questions *seriatim*, and first with regard to age. Age *per se* is certainly no contra-indication. Cataract is a disease of old age, and if we did not extract for patients advanced in life we should not operate at all. I was once called to see a gentleman suffering from cataract in his eightieth year, and strongly recommended operation; his wife, however, would not allow him to submit, on account, as she said, of "his great age." Six years later she died; the widower then sent for me, was operated on, and

FIG. 3.

recovered most excellent sight—so good that he was able to complete an archæological work on which he was engaged when his sight first failed. I have operated with perfect success upon both eyes in a patient over ninety, and upon a considerable number between eighty and ninety years of age. Lord Lyndhurst, the then Nestor of the House of Commons, was operated upon in his ninetieth year. The first eye was lost, but, with characteristic courage, he underwent the operation again and recovered excellent sight with the second eye. In fact, the hard senile cataract is more readily extracted than the less mature varieties of the same affection; and although persons of great age are generally very feeble and suffer from various senile affections, this, so far as my experience goes in hundreds of cases, does not seem to interfere very materially with the success of the operation. As to preliminary treatment, no doubt it is of the utmost importance that patients undergoing operation should be in a fair state of health. No doubt preparatory treatment similar to that adopted in the training of athletes would increase our chances of success if it were possible to carry it out, but experience teaches us that directions of this kind are never carried out at home, and admission to hospital only has a depressing effect. So that I think that the advice to persons about to be operated on may be summed up in two lines:

"Great temperance, open air,
Easy labour, little care."

You cannot train old people; and beyond this it is difficult to go. With regard to anæsthetics, when I commenced practice it was the custom to use chloroform in almost every case; subsequently ether was very generally employed; but for years past I have operated without any anæsthetic, and but for the splendid discovery of cocaine should have continued to do so. Chloroform I found from time to time gave rise to most distressing symptoms of impending dissolution. Ether caused great excitement. Both were followed by dangerous vomiting, and although the latter is incomparably safer than chloroform, the drunken violence both before and after is more dangerous, and I have known it on three occasions to provoke attacks of bronchitis, one of which proved fatal. Cocaine was employed in the cases we are now discussing, and its effect in numbing sensation, without interfering with the intelligent co-operation of the patient, as usual, left nothing to be desired. As to antiseptics, formerly it was believed that suppuration depended on deficient vital power either in the patient himself or the part injured, the degree of traumatism at the time of operation, or accidental injuries afterwards. Now we are assured that every case of suppuration depends upon infection of the wound. To quote the words of De Wecker: "Aujourd'hui nous savons que toute suppuration de la cornée est due à une infection de la plaie." However that may be, it is certain that antiseptic solutions are a very valuable addition to the resources of the operating surgeon. What is the best antiseptic to use? Well, bearing in mind the most important of all maxims in surgery, "Primum non nocere," I think you will find for general use a saturated solution of boracic acid the best. If you wish to be specially safe against microbes and macrobes, the same solution containing the twenty thousandth part of a grain of corrosive sublimate may be employed. As to after-treatment—if the slight pain which the patient experiences as the effect of the cocaine goes off does not pass away, but increases, bleed, inject morphia, and apply cold compresses; if suppuration threatens, use hot aromatic fomentations, with pressure bandages and throughout antiseptic dressings. Von Graefe objected to local bleeding for the first three days after extraction—I hardly know why; but when I attended his clinique in Berlin he strongly advised the students to avoid local bleeding for the first three days after extraction, preferring to take blood from the arm. In any way, whatever you do, you must kill the pain. *Obsta principiis*—stop the beginning, and before it begins if possible. I have taken twelve ounces of blood from the temple with the artificial leech myself in one case, and in another used seventy leeches; in both the eye was saved. In spite of every precaution, you will fail sometimes; that cannot be helped. "Time and chance happeneth to all"; but attention to the details to which I have briefly alluded, and which you see carried out here, will so far as possible ensure security to the patient, peace of mind to the operator, and brilliant results in a certain proportion of cases.

Gentlemen, I have invited a few of my patients to attend here this evening in order that you might have an opportunity of seeing the results obtainable by modern methods of extraction. Some of these present a notch more or less conspicuous in the iris, others have central and movable pupils; these last constitute the perfection of art, since art is to conceal art, and it would be difficult, if not impossible, for you to say whether they had been operated on or not. I introduced some patients, the subjects of double extraction treated in this way, to the notice of the members of the Clinical Society of London in 1878, and have since accumulated quite a number of similar cases. At the next lecture I hope to show you some novel methods of treating external and internal squints.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At the annual meeting on April 29th the following officers for the ensuing year were elected:—President: Dr. Cleaver. Vice-President: Mr. R. J. Pye-Smith. Treasurer: Mr. G. S. Taylor. Secretary: Mr. Simeon Snell. Additional Members of Committee: Dr. Keeling, Dr. Dyson, Dr. Porter, Mr. Thorpe, and Messrs. Garrard and E. Skinner. Pathological Committee: Dr. Gwynne, Mr. Atkin, Dr. S. White, and Mr. F. Harrison.

EXOPHTHALMIC GOITRE, AND OTHER CASES WITH ENLARGEMENT OF THE THYROID.

BY EDWARD SQUIRE, M.D., M.R.C.P.,

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CASE 1.—Mary Ann V——, aged fifteen years and two months, came under my care in January, 1884, when the following notes were taken. She is short for her age (5 ft. ½ in.), and has never menstruated. The thyroid is enlarged, especially the right lobe, and this has been noticeable for three months. The neck is dark-brown in colour. The circumference of the neck over the thyroid is 12 in. The eyes are slightly but obviously prominent, and her mother says she has noticed this for the past three years; she attributes it to a fright. The heart's action is very violent; the apex beat is in the fifth space, but displaced to the left about an inch outside the nipple. There is a loud *bruit de diable* in the neck, and a hæmic murmur over the base of the heart. There are choreic movements in the left arm. A sense of constriction is felt in the throat on swallowing. In January of this year I had another opportunity of examining her. She has grown much taller, and menstruation began three months ago and is regular. There are still prominence of the eyes, enlargement of the thyroid, over-action of the heart, and a loud anæmic bruit in the neck; but she considers herself much better than when I first saw her.

CASE 2.—Emma W——, aged twenty-two, married two years (no children), was admitted in February, 1884, complaining of severe frontal headache and loss of appetite. The thyroid is considerably enlarged, and has been so for three months; its size varies, being larger at the menstrual period, and then causes difficulty in swallowing. The neck now has a circumference of 15½ in. The eyes are sometimes painful, and project; this varies in extent with the variations in the size of the thyroid. There is excessive cardiac action, and faintness sometimes occurs. Menstruation is irregular, scanty, and painful. There is a brownish pigmentation of the face.

CASE 3.—Matilda R——, aged twenty, single. This patient came under observation in July, 1882, with sore-throat. She is stout, but not strong. The thyroid is much enlarged, the circumference of the neck being quite 14 in. She has always had a "full neck," but for the last four or five years it has at times been noticeably swollen, especially since she came to London three years ago. The last time it was as large as it is now was eleven months ago. It has been very big for the last three or four days, and is worse in the morning when she wakes, when it seems high up in her neck, "up to her chin," and causes a sensation of choking. She is now unable to fasten the collar of her dress. Menstruation is regular, though scanty, and is now present. The heart's action is very weak, but she complains of pulsation in the thyroid. There is a loud venous bruit in the neck, and a soft apex murmur. On Aug. 16th she had a hysterical fit in the evening, and states that before she came to London such fits were of frequent occurrence.

CASE 4.—Mrs. B——, aged twenty-two, married twelve months, and has one child three months old, which she has not been able to suckle. She was admitted in September, 1883, for cough, and had deficient resonance over the apex of the left lung. The thyroid is enlarged, and has been so for three years. It varies in size, but no connexion is noticed between the increase of the neck and the menstrual period, which has been regular. There is a loud anæmic bruit in the neck, but no hæmic murmur in the chest.

CASE 5.—Eliza R——, aged twenty, single. This patient, who is a stout well-grown girl, came under my care early this year complaining of lumbar pain. The thyroid is perceptibly enlarged, but causes no discomfort. The eyes are not prominent, and there is no over-action of the heart, though the patient complains of palpitation on exertion or after hurrying. There is a *bruit de diable* in the neck, and a soft hæmic apex murmur. Menstruation is regular, but scanty.

Remarks.—In the first two of the above cases we have examples of exophthalmic goitre, presenting singly no points of particular interest. They are described to be compared with those that follow. The first is a well-marked case, though the age of the patient is below that at which the disease is most common. The second, though a slight case, has all the essential symptoms—exophthalmos, enlargement of the thyroid, and increased cardiac action. Both of these show indications of the dark colouration of the skin which has been noticed in Graves' disease, and which is supposed to bear an analogy with the pigmentation seen in Addison's disease, depending on alterations in the sympathetic nerves and ganglia. The remaining cases are wanting in some one or more of the cardinal symptoms of Graves' disease, and cannot be so named if the concurrence of the three mentioned above is essential. According to the usual definition they are so; but the late Dr. Hilton Fagge, speaking of exophthalmic goitre,[1] warns us to be on the look-out for "slight cases in which one or two of the cardinal symptoms may be absent"; and Trousseau also insisted on this point, retaining the name "exophthalmic goitre" even when there is no exophthalmos.[2] Case 3 has enlargement of the thyroid, but with no prominence of the eyes; and the cardiac action is weak, instead of being over strong. She is anæmic and hysterical—conditions often associated with exophthalmic goitre; here the thyroid increases in size at the catamenial period as in Case 2. Case 4 has thyroid enlargement, which varies in degree, but without the periodicity noticed in these two cases. She has, like the last cases of the series, palpitation, but no exophthalmos. From one point of view, Cases 3, 4, and 5 would appear to be examples of simple anæmia, in which enlargement of the thyroid occurs as one of the symptoms. The question then arises, whether the enlargement of the thyroid may not be a result of laxity of the tissues—a loss of tonicity—due to malnutrition from impoverished blood-supply. Over-action of the heart is also a frequent symptom in anæmia, and we have only the exophthalmos to explain to bring Graves' disease down from its position as a separate disease to the level of several other conditions which were loosely spoken of as diseases in themselves (such as albuminuria and jaundice), and are now recognised as merely symptoms. Begbie mentioned chlorosis and anæmia as powerful factors in inducing Graves' disease, but later writers consider it more probable that anæmia is a result.[3] If so, it is sometimes a very early result, preceding some of the diagnostic symptoms of the disease. Graves himself thought that palpitation was the cause of the other two cardinal symptoms. Investigation with a view to discover a pathological cause for Graves' disease, has produced no very definite result. Some observers have found degenerative conditions of the cervical sympathetic, which have been found wanting by others in necropsies on patients who were the subjects of undoubted exophthalmic goitre. It would appear, therefore, that the prominence of the eyes is not dependent on this condition of the sympathetics alone. Exophthalmos has been ascribed to repletion of the orbital vessels, as the bronchocele to a similar condition of the vessels of the thyroid, which repletion is due to loss of vascular tone. The loss of tone in the vessels is explained as a result of paralysis of the vaso-motor nerves of the thyroid, head, and neck. May not this depend on the want of healthy blood-supply to those nerve-centres in common with the rest of the tissues. In anæmia we have many signs that the tissues suffer from the supply of impoverished blood. Muscular weakness is common; weakness of nerve-control is shown by the easily induced palpitation and cold sweats from slight shocks or emotions in these patients, and by hysterical manifestations; and vascular want of tone explains the swelling of feet and ankles. Caleb Parry describes[4] twelve cases of enlarged thyroid in women and one in a man, of which four of the female cases and that in the male he describes as associated with head symptoms. The remaining eight—of which the first, observed in 1786, has her eyes "protruded from their sockets"—he speaks of as "enlargement of the thyroid gland in connexion with enlargement and palpitation of the heart"; and places them under the heading "Diseases of the Heart." Three occur in youngish unmarried women, and are associated with palpitation; the remainder, including that with exophthalmos, are in older women, and appear to be associated with heart disease. In one of the former the

[1] Principles of Medicine.
[2] Trousseau's Clinical Medicine. New Sydenham Society, 1868, vol. i., pp. 557.
[3] Vide Ross: Diseases of the Nervous System.
[4] Unpublished writings (1825).

enlargement of the thyroid is attributed to a fright, and the tumour enlarges at the menstrual period. In all, throbbing of the carotids is noted. On these cases he makes the following comments: "Enlargements of the thyroid gland are not uncommon in females about the period when the body is fully formed and the menses are in a sort of wavering state. After both these points are completely established, they generally disappear if the health is otherwise good.....It is indeed true that these swellings occur most often and in the greatest degree in young females who have led sedentary lives, and who are of what are called relaxed and nervous habits." It has appeared to me that slight enlargement of the thyroid is not uncommon in anæmic and emotional women. If this occur without exophthalmos and palpitation, we look on it merely as a symptom of the general condition; but if all three are present in the same patient, we give a different name to the illness, and seek a different pathological cause. Advance in science usually tends towards simplification in classification. Have we not in this case arrived rather at greater complexity?

A CASE OF
COMPOUND FRACTURE OF THE PATELLA; PARTIAL NECROSIS OF ONE OF THE FRAGMENTS; RECOVERY WITH MOVABLE JOINT.

WITH NOTES OF NINETEEN OTHER CASES OF COMPOUND FRACTURE OF THE PATELLA.[1]

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F. S——, aged thirty-two, married, sustained a compound fracture of the left patella by striking his knee against the kerbstone. The fracture was transverse, and over it was a nearly horizontal contused wound two inches and a half long, which freely communicated with the cavity of the joint, which was filled with blood-clot; separation of fragments, half an inch to an inch. The joint was syringed out with carbolic lotion (1 in 20), and full aseptic precautions used in the dressing and subsequent treatment of the case, there being no drainage other than that permitted by the wound. The case ran an aseptic course. There was no fever whatever. The wound would have healed readily but for a small sinus leading down to an exposed piece of the lower fragment. A sequestrum came away from this six weeks after the injury. Cicatrisation was soon afterwards complete. The patient has attended as an out-patient. He can now (March 16th) walk about and flex his knee very nearly to a right angle. The fragments are separated by about three-quarters of an inch when the limb is in the extended position; by about an inch and a quarter when the knee is flexed. The lower fragment is widened and irregular; at the outer part the skin is slightly adherent.

This case, I think, presents several points of interest: the transverse direction of the fracture; the little separation of the fragments; the aseptic course, although a portion of one of the fragments necrosed; the question of the immediate treatment of the injury, and when and to what extent passive motion should have subsequently been employed. Compound fractures of the patella are very often comminuted or -<-shaped, but both in Mr. Poland's cases in the fifty-third volume of the Medical and Chirurgical Transactions, and in some others I have collected, it is far from uncommon to find the direction of the fracture transverse. The fragments in compound cases appears often to be less widely separated than in simple ones; this may be due to the escape of fluid from the wound, or from the fact that muscular action has less to do with the causation.

The question of the immediate treatment in this case resolved itself into one either of suturing the fragments or simply leaving the wound alone, for I suppose that in these days of aseptic surgery few surgeons would be found to recommend either excision or amputation to a healthy man of thirty-two with a clean, although contused, wound over a fractured patella. I decided to adopt an expectant plan of treatment rather than suture, for the following reasons: the fragments were not at all widely separated; the injury was nearly twenty four hours old when I first saw the patient, and the case was doing well; there was sufficient drainage already provided by the wound; I could not tell to what extent the fragments were already injured, and, consequently, whether they would bear the strain of wiring. From the subsequent necrosis it would appear that it was well they were not subjected to further mechanical injury. Passive motion was necessarily delayed until the separation of the sequestrum and the final union of the wound. When cicatrisation first occurred there was considerable prominence of a pointed fragment, and it seemed as if very slight violence would cause this to perforate the skin. I have on several occasions flexed the limb as far as I dared, but the fragments being as yet united by fibrous tissue, I have been afraid of stretching or rupturing the uniting band.

It may be interesting to compare the results of Mr. Poland's cases, published in 1870, with some recent cases which have occurred since the more general adoption of antiseptic surgery. In Mr. Poland's eighty-five cases the treatment adopted was "strapping where permissible, ice, leeches, irrigation; and in the suppurating stage fomentations and free incisions, opium, tonics, and support." Mr. Poland divides his cases into those with incised wounds, of which six recovered and two died; those with lacerated and contused wounds, of which thirty recovered and nine died; those associated with gunshot wounds, of which eighteen recovered and threedied; those associated with lesions of other bones, of which ten recovered and six died: total, eighty-four recoveries and twenty deaths. The joint suppurated in sixty-three cases, and of those that recovered thirty-one had more or less complete ankylosis. The above statistics, as Mr. Poland observes, probably give too favourable a view of the result of such treatment, as successful cases more often find their way into newspapers than the unsuccessful. This remark will apply with equal force to the cases I am about to relate.

Mr. Rouse has had two cases at St. George's Hospital. 1. Henry R——, aged forty-seven, fell on to his right knee from a height of from twelve to fourteen feet, striking it against the pavement. There was a small lacerated wound over the patella, which was obliquely fractured across the centre. There was half an inch separation of the fragments, the lower of which consisted of two pieces, the external wound corresponding to a depression between them. Antiseptic precautions were used, and a ham splint applied. The temperature rose on the third day to 101° in the evening, otherwise it was normal throughout. The patient recovered with a perfectly movable joint. 2. Edward B——, aged thirty-three, fell from a cart on to his left knee, sustaining a compound comminuted fracture of the patella, over which was a circular contused wound, "which evidently communicates with the joint, although no synovia escapes." The wound was syringed out with carbolic lotion and dressed antiseptically with carbolic gauze. The temperature rose to 100° in the evening, otherwise it was normal throughout the case. The patient recovered, with a movable joint, without any bad symptom whatever.

Mr. Pick read before the Clinical Society on Oct. 18th, 1875,[2] a case of extensive wound of the knee-joint treated by Lister's antiseptic method, in which the patella was divided by a circular saw and the condyle of the femur wounded. The joint was washed out with carbolic lotion (1 in 40). Suppuration followed, and the patient, a young man aged eighteen, recovered with firm bony ankylosis of the joint.

Mr. Finlay[3] records a case of bullet-wound of the knee-joint in which the patella was "grooved" by the projectile, which finally lodged in the femur. The wound was washed out with carbolised water, the bullet extracted, and carbolic oil employed as a dressing. A little fever followed, but the patient, a man aged thirty-one, recovered with a perfect joint.

Mr. Wheelhouse:[4]—Margaret M——, aged twenty-four, fell some twelve feet on to her right knee. Clean transverse wound; fragments half an inch apart; no comminution except one small splinter from upper one. Wound enlarged; joint cleared of blood and washed out with 1 in 20 carbolic lotion. Fragments drilled and wired. No drainage of any kind. Full aseptic precautions. Wound ran an aseptic

[1] Read at the Harveian Society, March 18th.

[2] Brit. Med. Jour., Oct. 16th, 1875. [3] Ibid., vol. i., 1883.
[4] Ibid., June 9th, 1883.

course. Patient able to flex knee beyond a right angle. Injured patella as sound as the other.

Mr. Jessop:[5]—Robert L——, aged seventeen, fell into a quarry, striking bent right knee on a steel rail. Brought to the hospital eleven hours after this; the wound full of sand and mud. Compound comminuted transverse fracture of patella; fragments separated half an inch; severely contused wound. Wound purified; joint irrigated for nearly an hour. Fragments wired; posterior drainage. Free suppuration followed. Wire removed on thirty-sixth day. Full aseptic precautions throughout. Some adhesions broken down by passive motion. Patient eventually recovered with absolutely perfect movement of joint.

Mr. Ormsby:[6]—James B——, aged twenty-four, was struck by a puncheon on his left knee, receiving a compound fracture of the patella, with two inches' separation of the fragments. Wound sealed by pad of lint soaked in blood. Evaporating lotion applied; long posterior splint; no bad symptom. Wound healed without suppuration. When discharged he was able to walk without the help of crutches.

Mr. Manser:[7]—B. W——, aged thirty-six. Gunshot wound. Comminuted fracture of femur and patella; lodgment of pointed piece of gun-barrel in external condyle of femur. This was removed. Attempted antiseptic treatment. Erysipelas of thigh, scrotum, and abdomen. Antiseptics discontinued. Symptoms extremely grave, but patient ultimately recovered with firm fibrous ankylosis of knee.

Dr. John M'Diarmid:[8]—J. B——, aged sixty, a female drunkard, leapt out of window two storeys high and struck her left knee against the edge of a cart-wheel tire. Seen twelve hours afterwards. Transverse wound two inches and a half long opening into joint; patella fractured; lower fourth splintered; ligamentum patellæ divided. Loose fragments removed; wound washed with water, and lint steeped in 1 in 20 carbolic oil laid over the knee; long padded Gooch's splint applied. Treated by cold lotions, the wound itself being protected by lint steeped in carbolic oil. Favourable course; recovered; able to bend knee almost to a right angle and to walk up and down stairs.

Volkmann[9] mentions two cases of compound comminuted fracture of the patella, both of which recovered with movable joints. They were treated antiseptically.

Mr. Langley Browne reports a case:[10]—Isaac C——, aged thirty-five, received a wound from an axe on the left knee. Wound oblique, two inches and a half long. Patella divided into two pieces; knee-joint enormously distended with clot, which was turned out. Lister's dressings and treatment were employed. The joint was washed out with carbolic lotion, and was dressed for the first time on the ninth day; there was no pus; it was quite healthy. On the sixteenth day the wound had healed, and a pasteboard and starch splint was applied. On the thirtieth day he was discharged cured (no note as to separation of fragments, method of union, or mobility of joint).

Dr. Stimson:[11]—Edward C——, aged twenty-two, fell from a pillar of an elevated railway, receiving a transverse fracture of the patella below the centre; there was no comminution or bruising. There was a clean-cut transverse wound an inch and a quarter long; the wound was dressed with carbolised gauze. Next day he was first seen by Dr. Stimson. The wound was then enlarged, the fragments sutured with silver wire, and gauze dressings applied. Some suppuration on the outer side of the lower portion of the thigh followed, otherwise the wound did well. When discharged, the patellar fragments had united by a fibrous band a quarter of an inch long. Ten days afterwards he could flex the joint 10° without pain. A month afterwards a small fragment of the patella just under the skin above the drainage opening on the outer side was removed. This had evidently been keeping up suppuration. When last seen the mobility of the joint was increasing.

Mr. W. Thomson:[12]—T. G—— had been operated on by the late Mr. Amplett for ununited fracture of the patella. Osseous union was obtained, but the joint remained stiff. He fell and laid open the knee-joint, refracturing the patella at the seat of the old injury. Excision of the joint was performed, and he recovered with some three-quarters of an inch shortening.

Mr. James has had two cases:—1. A. J——, aged twenty-seven, struck his knee against the sharp edge of a water-plug, receiving a lacerated wound two inches long, communicating with a transverse fracture of the patella, the fragments being widely separated. Cavity of joint freely laid open, and a quantity of blood effused into it. Blood squeezed out; long back splint; foot suspended; interrupted side outer splint; perforated zinc splint on inner side. Joint syringed out with carbolic oil (1 in 20). Lister's dressings and method. Dressed under spray every second day. On the eighth day a rise of temperature to 102°; otherwise no fever. The wound healed on the twenty-eighth day. "Three-quarters of an inch interval between the fragments; able to bend the knee slightly, and states that the amount of flexion is increasing; able to walk ten miles without a stick."[13] 2. C. H——, aged thirty-five, half caste. Twenty-four hours before admission she jumped out of a vehicle while the horse was bolting and fell on to a heap of loose metal, against which her left knee struck with great violence. Compound fracture of the patella ensued, which was greatly comminuted; large lacerated wound across the front of the knee-joint. The wound was thoroughly washed with carbolic lotion and dressed antiseptically. Back splint suspension from cradle. Fever and pain for two days. Incision on the outer side of the joint. Fragments of the patella, which were widely separated and covered with decomposing clot, were removed. The extensor tendon and ligamentum patellæ were approximated by two sutures of gold wire and one of kangaroo tendon. Antiseptic dressings. Some sloughing and burrowing of pus on the outer side of the joint followed. Mr. James remarks: "Severe case; joint filled with road dirt; many hours since accident; from present condition I believe she will have fair joint motion in time."[14]

Mr. Davies-Colley has treated two cases of compound fracture of the patella antiseptically. In one case a silver wire was passed right through both fragments. He saw the man a few weeks ago; he could then walk well. His leg was nearly straight, and the range of movement was only 3°. The patella could be moved a little from side to side. Mr. Davies-Colley writes: "I thought that by passive motion he might improve it considerably, but I dared not bend it forcibly, as the bony union did not extend over the whole breadth of the patella. At the side of the bone was a deep notch left by the removal of a fragment. Since this case I have treated another patient under more favourable circumstances—i.e., from an hour or two after the receipt of the injury. I had not to wire the fragments, and bony union resulted with perfect movement, the condition of the wound having remained aseptic throughout."

I am indebted to Mr. Battle for the following case, which was under the care of Mr. Sydney Jones at St. Thomas's Hospital:—"A. B——, a male, aged nineteen, strongly built and heavy, fell down a lift, striking his knee on a bar below. The wound extended across the tendo patellæ, and there was comminuted fracture of the patella. The wound formed a flap over the front of and into the joint, and carried upward the greater part of the bone. The bone was wired soon after admission, with lateral drainage. The patient recovered, with partial movement. There was good union."

Summary of above cases.

Total cases, 20. All recovered: 12 with good movement, 5 with slight movement. In 3 ankylosis occurred (one after excision of joint).

Antiseptic treatment (without suture): 9 cases, of which 7 recovered with good movement, 1 with partial movement, and 1 with bony ankylosis.

Antiseptic suture: 5 cases, of which 2 recovered with good movement, 3 with partial movement.

Carbolic oil to wound: 2 cases, both of which recovered, with good movement.

Lint soaked in blood applied to wound: 1 case; good movement.

Removal of patellar fragments; suture of quadriceps to ligamentum patellæ: 1 case; slight movement.

Excision of knee: 1 case.

Antiseptic treatment for a time: 1 case; fibrous ankylosis of joint (complicated with erysipelas and lodgment of piece of gun-barrel in condyle of femur).

[5] Ibid., June 9th, 1883.
[6] Dublin Medical Journal, vol. lxxvi.
[7] THE LANCET, Jan. 24th, 1880.
[8] Braithwaite's Retrospect, 1876, vol. ii.
[9] Edinburgh Medical Journal, 1875, p. 796.
[10] Birm. Med. Review, 1881, p. 149.
[11] New York Med. Jour., 1883, vol. xxxvii., pp. 621-624.
[12] Brit. Med. Jour., Aug. 30th, 1862.
[13] Austral. Med. Jour. (Melbourne, 1881), p. 400.
[14] Ibid., 1884.

ON THE NATURE OF WHOOPING-COUGH;

WITH A DESCRIPTION OF A NEW MODE OF TREATMENT INTRODUCED BY PROFESSOR MONCORVO, OF RIO DE JANEIRO, AND ITS PRACTICAL RESULTS.[1]

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THE disease which I am about to consider, pertussis or tussis convulsiva, and in English chin-cough or whooping-cough, has been known probably since A.D. 1414, and certainly since 1510. It is one of the most common and universal of diseases, and yet its true nature and etiology is as much a subject of controversy now as in the days of Sydenham. There has been no lack of subjects for observation, nor, from its very nature, is there much difficulty of diagnosis, and there is little reason to doubt that in time past the epidemics of whooping-cough recurred with the same regularity as they do now, and, as we know by the charts compiled from the Swedish statistics and published by Professor Arthur Ransome,[2] that they have done so since 1775. Cullen,[3] Brouzet,[4] Pinel,[5] and several others have placed the origin in irritation of the gastric and intestinal surfaces. Padalme[6] associates with these the lungs and the diaphragm. Watt,[7] Allcock,[8] and Laennec consider it as a spasmodic variety of bronchitis, and Broussais[9] adds to this an exaggerated irritability of the mucous lining of the inflamed bronchi. Trousseau[10] and Richard de Nancy[11] believed it to consist of a bronchitis grafted upon a neurosis. Albers, of Bonn,[12] found in three cases out of forty-seven in which a careful post-mortem examination was made the vagus nerve on the right side inflamed, and in one that of the left side. Dr. Charles West[13] records a similar observation in one case out of twenty-four, and remarks that "an appearance so frequently absent cannot be of much moment"; in this case both nerves were affected. Webster[14] considered the true seat of the disease to be the encephalon, and Desruelles[15] was of a similar opinion, and even designated it by the name of "broncho-encéphalite." The peculiarities of this disease, its definite period of incubation (fourteen days), and the frequency with which the epidemic cycles coincide with those of measles, or closely follow or precede them, have not escaped the notice of observers, and have of late years been graphically placed before us in the charts of epidemic disease prepared by Dr. A. Ransome, and published by the Sanitary Association, borne out as they have been by the long series of Swedish statistics, charts of which have been published by the same accomplished physician in the work to which I have before alluded (see note 2). These observations have led many (notable among whom we find Rokitansky and M. Barthez and Rilliet[16]) to believe the disease to be a specific fever analogous to the eruptive fevers, and some have even gone so far as to assert the identity of measles and whooping-cough. This latter opinion has been supported by Professor Germain Sée.[17] Gueneau de Mussy[18] also admits the very closest relations between these diseases. In this regard also may be here quoted certain replies made by forty-seven medical practitioners, to whom the following questions had been addressed by Dr. Octavius Sturges, who publishes the same in his "Lectures on some of the Distinctive Characters of Disease in Early Life."[19] "1. Have you met with pertussus arising out of catarrh, measles, &c., but, so far as could be ascertained, apart from direct infection? If so, how many within (say) the last three years? 2. In what proportion of such cases has pertussis been prevalent at the same time in the immediate neighbourhood?" Of the forty-seven replies eight say "No" to both questions, ten say "No" to the first and vary as to the second, six are doubtful, but twenty-three say "Yes" to the first question and answer variously as to the second. The main result shows that more than half the number of men engaged in active practice who were appealed to believed themselves to have seen the cough develop from measles or catarrh. He gives a case in detail, which is related by Dr. Donkin, of Westminster and the Shadwell Children's Hospitals, which, as it comes with the name of a competent observer, and is in itself a good example of the cases, I will quote. "Two boys," says Dr. Donkin, "aged three and five, had scarlet fever, and were confined to two communicating top rooms of the house, no one being suffered to see them except their father, a medical man, and a nurse who was constantly with them. For about a week, during the father's absence, another doctor visited them. Both children had marked bronchitis during the fever, and one had broncho-pneumonia. About five weeks after the onset of the scarlatina both began to whoop, and both continued to suffer from typical whooping-cough for many weeks after recovery from all signs and sequelæ of scarlet fever. During the whole time of their isolation a carbolised sheet was hung outside the door, and carbolised vapour or creasote was constantly diffused through the rooms." Dr. Sturges seems to think that this history is not to be accounted for except by a theory of spontaneous evolution, or on the hypothesis that there is no limit of time for incubation or "of space or agent, through which the contagion may travel." I venture, however, to suggest a more homely explanation of this and other similar cases which have not unfrequently puzzled the practitioner. All who have had practical experience of the management of infectious or contagious disease in children at their own homes will agree with me as to the difficulty, even under the most favourable circumstances, of maintaining perfect isolation for any lengthened period, and especially does this become difficult as convalescence proceeds. There was a nurse there; there was a strange medical man, and both he and the father might have visited cases of pertussis: who can say that no neighbour's child could have been admitted to the room? True, there were disinfectants and the carbolised sheet at the door, but this latter popular antiseptic placebo is, in my humble opinion, of more value in the treatment of the parents than protective to the patients, and my experience of vapours of creasote and carbolic acid shows that if they are strong enough to be of any value as antiseptics, they are too strong for the patient; but of this I shall have more to say hereafter. Moreover, if whooping-cough were identical with or developed from either of the exanthematous fevers, we should find their cycles coincide, either absolutely or in sequence, which is clearly not the case.

A glance at Dr. Ransome's charts will show that, though the epidemic cycles of this disease and of measles form arcs of circles of a very similar radius, yet there is no absolute coincidence, the highest points of these curves sometimes preceding, sometimes following, in some cases corresponding to the lowest points of the other, and very rarely coinciding. In the case of scarlet fever there does not seem to be any relation whatever; but in the case of bronchitis and catarrh there is a rough agreement in the curves, not always but very generally coincident. In the case of Sweden the curves are of much greater radius, the highest points being attained in an unbroken series of statistics, extending from 1775 to 1830—in the case of measles at an average interval of a fraction over seven years, and in the case of whooping-cough a fraction under five years.[20] Out of fifty cases of whooping-cough which I have observed for the purpose of this paper, I have found that in no case has the cough either coincided

[1] Read before the Manchester Central Medical Society.
[2] Proceedings of Manchr. Lit. and Phil. Soc., vol. xix., No. 8, 1879–80.
[3] First Lines of the Practice of Physic.
[4] Essai sur l'Éducation Méd. des Enf. et de leur Traitement, p. 25. Paris, 1754.
[5] Des Mal. de l'Enfance, tom. ii. Paris, an. vii.
[6] De la Coqueluche. Paris, 1815.
[7] Treatise on the History, Nature, and Treatment of Chin-cough. London, 1818.
[8] Lectures on Surgery.
[9] Annales de Médecine Phys. Paris, 1824.
[10] Clinique Méd. de l'Hôtel Dieu, tom. ii. Paris, 1868.
[11] Traité Prat. des Mal. des Enf. Paris, 1839.
[12] Quoted by Aberle: De Tussi. Convulsivâ, p. 45. Vindobona, 1843.
[13] Diseases of Infancy and Childhood, p. 481. London, 1865.
[14] London Medical and Physiological Journal, 1822.
[15] Traité de la Coqueluche. Paris, 1827.
[16] Traité Clin. et Prat. des Maladies des Enfants, tom. ii., p. 616. Paris, 1854.
[17] Archives Générales de Méd. Paris, 1854.
[18] Clin. Méd., tom. ii., p. 594. Paris, 1875.
[19] Medical Times, July 4th, 1885.
[20] Ransome, loc. cit. (note 2). The exact numbers being for measles an average interval of 7¼ years, and for pertussis 4⅞ years. The numbers for scarlet fever show no kind of proportion, the exact numbers of years intervening between the epidemics being 4, 4, 4, 5, 13, 2, 4 years; but the second, fourth, sixth, and seventh were very much lower figures than the others, and the highest figure recorded is the last. The numbers, it is to be noted, represent the deaths, and that they were registered by what Dr. Berg of Stockholm calls in his letter to Dr. Ransome "ecclesiastical registrars," doubtless meaning the pastors of the various parishes or their equivalents, who may sometimes have made erroneous diagnoses; but this source of error is scarcely likely to have affected in any marked degree the cases of such easily recognised and popularly known diseases as whooping-cough, or even measles, though it may not improbably have some effect upon those of scarlet fever.

with the outbreak or preceded the eruption; but my wider general experience furnishes me with many cases of convulsive, crowing inspiration simulating croup, which have been relieved by an outbreak of measles; and in several instances the latter disease was followed by whooping-cough. In twelve cases out of fifty the attack of measles was followed by whooping-cough at a period varying from three months to three weeks. In one case there had been a cough ever since an attack of measles twelve months previously, which developed into whooping-cough, while the child was under observation. A recent writer to whom I have already referred, Dr. Octavius Sturges,[21] has promulgated the opinion that the whooping is simply a nervous adjunct to an epidemic catarrh,[22] and he quotes Bouchut[23] thus: "Whooping-cough is transmitted like a large number of nervous affections—like hiccough, vomiting, hysterical attacks, &c."; and he complains that Dr. West has dismissed the notion with something very like contempt. There is no doubt that the disease does present some points of resemblance to the pure neuroses, but have we not overwhelming proof of a definite and distinct period of incubation?—and how upon such a supposition is this to be accounted for? His strongest argument seems to be the immunity of children's hospitals, and in this he is quite corroborated by the experience of the Hospital for Sick Children at Pendlebury, and probably the practice there may give the explanation of the fact. It is the custom to refuse to admit cases where the cough is already developed, and when a case arises it is sent home at once, except in one or two exceptional cases, which have been treated in a special ward. Now the contagion of most zymotic diseases is much less virulent in the earlier stages, and in Pendlebury Hospital, at any rate, the special wards are as carefully isolated from the general wards as are these from each other, and it is probable that the area of infection is less in this disease than in most others. At all events, we do not find that the power of infection is in any degree lost when the patients are removed to their own homes, and although we may allow that, as with other undoubtedly infectious diseases, there may be occasional sporadic cases of whooping-cough, yet we are inclined to attribute these to causes which have escaped discovery from defective knowledge and want of opportunity for complete investigation rather than allow them to form a reason for denying the specific nature of the *materies morbi*.

Continuing our history, not in chronological, but rather in an anatomical order, we find Dr. Ebenezer Watson, of Glasgow,[24] used topical applications to the larynx, and five years later we find him complaining of the little attention which had been paid to this mode of treatment. Gendrin[25] considered that the seat of irritation was in the isthmus of the larynx; and Beau[26] published three necropsies in which he found an exaggerated inflammatory redness of the mucous membrane which lines the supra-glottic portion of the larynx. Dr. West also mentions[27] finding "a state of extreme irritability about the fauces"; and a little later the observations of the former two authors were corroborated by two new necropsies by the late Prof. Parrot. Still more recently Vannebrough[28] by four necropsies, and E. Lelu[29] by two others made in 1874 at the Hôpital des Enfants at Paris, have verified the existence of similar conditions.

(To be continued.)

[21] Lectures on some of the Distinctive Characters of Disease in Early Life. Medical Times and Gazette, July 4th, 1885. Lecture iii.

[22] Sturges, loc. cit. I quote his conclusions here, so as to avoid any misrepresentation. "1. Convulsive (or whooping) cough is a purely nervous phenomenon, the expression of a special liability of childhood in respect of spasm, of which other illustrations are to be found in laryngismus and spasm of the glottis. 2. Pulmonary catarrh in young children may at any time give rise to convulsive cough, and does, as a fact, frequently give rise to it apart from any special infection." Of the second proposition the evidence he quotes does not seem to me to be conclusive.

[23] Maladies des Nouveau-nés.

[24] Edinburgh Monthly Journal, December, 1849.

[25] Gazette Médicale de Paris, 1850.

[26] Archiv. Générales de Méd. Paris, 1836. [27] Op. cit., p. 454.

[28] De la Coqueluche et particulièrement du Siège, et de la Nature de l'Affection. Thèse de Paris, 1859.

[29] Du Siège de la Coqueluche, et de son Traitement. Paris, 1874.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—At the next quarterly meeting of this Association, to be held at Bethlem Hospital, on May 19th, at 4 P.M., Dr. Savage will read a paper, entitled "A case of Insanity cured by removal of the Beard in a Woman;" and Dr. Percy Smith one on "Notes on a case of Ovariotomy in an Insane Patient."

THREE CASES OF ŒDEMATOUS LARYNGITIS THREATENING SUFFOCATION,

SUCCESSFULLY TREATED BY ENDO-LARYNGEAL SCARIFICATION.

BY GEORGE MACKERN, M.D. LOND.,
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CASES of acute œdematous laryngitis present symptoms of so urgent a nature that usually but little opportunity is afforded of making an accurate laryngoscopic examination on which a scientific treatment may be based. In each of the following cases a satisfactory examination of the larynx was obtainable, and I venture to publish them that others may be encouraged to adopt a similar direct treatment in the dangerous condition of œdema within the larynx. These cases, though differing widely in the character of the primary disease, agree in the severity of the secondary laryngeal symptoms, and in the promptitude with which these symptoms yielded to similar surgical measures. In all complete aphonia was present, and the patients were in such evident danger of a fatal apnœa that tracheotomy instruments were kept ready at hand in case immediate relief were not given by the scarification.

CASE I. *Solitary syphilitic gumma situated on the cricoid cartilage; gradually supervening œdema of the whole larynx.*—N. Y——, a native of Buenos Ayres, aged forty, of no occupation, was first seen by me in consultation with Dr. Alston on Dec. 13th (the middle of summer here). The personal history showed that, years before, the patient had gone through the usual stages of syphilis, and that he had recently suffered much from pains in his head and in the osseous system generally. Up to this date, however, no nodes or external gummatous formations had ever been observed. Two years previously he had suffered from what appears to have been paroxysmal hæmatinuria, and recovered under treatment at Naples. It must also be noted that he had never been troubled with his throat till the present attack. The patient stated that three weeks previously he first began to complain of pain and difficulty in swallowing, and he also noticed he was getting hoarse. As he was about to embark on a long journey up the river, he consulted his medical adviser, who, without examining the larynx, told him he might go in safety, and prescribed a simple gargle. He returned on the 12th, feeling very ill and breathing with difficulty, but he had not had any actual spasmodic attacks of dyspnœa during the voyage.

When seen on Dec. 13th, he was a tall, thin man, of dark complexion. He had an anxious expression, and the voice was reduced to a mere whisper. Respiration was slow and laboured; the inspirations noisy, but not accompanied by "downward excursions" of the larynx. There was a short, dry cough, and occasionally a scanty mucoid expectoration. He had passed several bad nights, being unable to lie down on account of dyspnœa. He had had no actual spasms—i.e., severe and sudden attacks of dyspnœa, thus contrasting with the other two cases, where this symptom was very pronounced. (I would draw here particular attention to this, as serving, perhaps, to distinguish a gradual œdema from the more acute variety; in the former case the respiratory centre had time to accommodate itself to the increased amount of carbonic acid in the blood, while in the latter the poisoning was more acute.) Externally there was nothing noticeable about the larynx except some tenderness on pressure. On laryngoscopic examination the mouth and pharynx were quite normal. The examination was made by the aid of a Mackenzie lamp, and a good view of the larynx was obtained with ease; in fact, there appeared to be some anæsthesia of the soft palate and parts around (toxic effects of CO_2 circulating in the blood?), which allowed of free use of the small mirror. The epiglottis showed no marked change, the tip and edges being merely somewhat more congested than usual. The larynx proper, however, was intensely congested, the right half being more especially so. The mucous membrane over the arytenoid cartilages and ventricular bands (false vocal cords) was much swollen, the lumen of the glottic opening being reduced to a mere chink, through which the air passed in frothy bubbles. The swelling was not equal on both sides owing to the greater tumefaction of

the right side, and the chink of the glottis appeared oblique and inclined towards the left. The vocal cords were not visible, being completely covered by the greatly swollen ventricular bands. On the right half of the cricoid cartilage, just behind the corresponding arytenoid cartilage, a whitish swelling was seen, circular in shape, about half an inch in diameter, with its circumference sharply defined, and its surface smooth and glistening, contrasting vividly with the surrounding congested tissues. When touched with the laryngeal probe, the tumour felt elastic and semi-fluid. No ulcerations of any sort were to be seen in the larynx. Reserving the question of the nature of the tumour for discussion later on, it was evident that its presence, in the absence of all other causes, was the cause of the œdema, because the parts immediately surrounding it were intensely inflamed, and the œdema, on the whole, was greater on that side of the larynx.

Owing to the dangerous amount of dyspnœa present, I was afraid to attempt the removal of the tumour at once, but determined to reduce the œdema directly. Accordingly I passed a guarded laryngeal lancet with the aid of the mirror, and made several punctures into the œdematous mass. Some drops of dark blood immediately escaped, and I was quite astonished at the little spasm and irritation excited by the operation. Strong blistering fluid was then painted over the thyroid cartilage in front of the neck, and hot inhalations of compound tincture of benzoin were recommended for five minutes every hour, also ten grains of bromide of potassium with two grains of the iodide to be given every two hours during the night. The effect of the inhalations was to cause a considerable flow of frothy and blood-stained mucus and saliva. Next morning I found that the temperature had become lowered from 101·8° to 100°, and that the patient had slept for about an hour. He was still suffering much from dyspnœa, and finding that the œdema had decreased but slightly, I again scarified, and very freely this time; a more abundant flow of blood was the result, and a strong spasm. I had to change the bromide of potassium for the soda salt and to leave out the iodide, on account of stomach irritation. Next day he was much better, had slept at intervals during the night, and his face had a less anxious expression, but there was still much stridor on inspiration. On the next morning, as considerable improvement had taken place and the chink of the glottis was more open, I determined to cut into the white tumour, believing it to be an abscess. With a long curved bistoury and the aid of the mirror I cut right across it, but with a negative result—scarcely a drop of blood. Then with sharp laryngeal forceps I seized the tumour and removed it easily from its bed; no hæmorrhage resulted, and but slight spasm was provoked. The site of the tumour was pale pink, granular-looking, and was probably eroded cartilage, as it felt rough to the laryngeal probe. On examination, the tumour was of the size of a hazel-nut, of firm consistence, semi-transparent, and its capsule was tough, fibrous, and quite adherent; it had been completely divided by the bistoury. The microscope showed the little tumour to be a typical gumma. The case then went on well to recovery. Some ulcerations appeared along the free border of the right ventricular band, but there was no exfoliation of cartilage or any more œdema. The patient was put on iodide of sodium, and in three weeks' time his voice had almost recovered its natural timbre and he had gone to the seaside to recruit.

Remarks.—The diagnosis of the white swelling lay between abscess and a syphilitic gumma. If abscess, it would probably be of perichondritic origin, and against this were (1) the short history of laryngeal trouble, (2) the little pain, and (3) the slight tenderness on pressure. As a rule, in perichondritis of the larynx there is much pain, and considerable tenderness on pressure externally. Against the gumma was the absence of all other signs of syphilis in the larynx; there were not even ulcerations on the epiglottis. I decided on abscess on account of the physical signs, the white appearance, and the elastic feel to the laryngeal probe. Another point of interest in the case was the tolerance for examination and instrumentation.

CASE 2. *Acute œdematous laryngitis by contiguity from pharyngitis; great swelling of left arytenoid cartilage and ventricular band; endo-laryngeal scarification, followed by recovery, with ankylosis of the crico-arytænoid articulation and permanent immobility of the left vocal cord.*—R. C——, a short, thin, dark-complexioned man, a native of Paraguay, aged forty-six. I was called to see this case in consultation on the tenth day of his illness, which began with acute pharyngitis. The laryngeal symptoms had come on only during the last two days, and were urgent from the beginning. I found the patient propped up in bed, with an anxious expression of face, severe inspiratory dyspnœa, quick and small pulse, moist skin, completely aphonic, unable to swallow on account of dysphagia, and with a temperature of 101·6°.

On examination the pharynx was much inflamed, and the left side was so swollen and the mucous membrane of such a peculiarly livid hue, that I inclined to the opinion that we were dealing with a case of pharyngeal erysipelas. Externally, the left side of the neck was swollen and brawny to the touch, and there was much tenderness on pressure over the left side of the thyroid and cricoid cartilages. The laryngoscopic examination was difficult, and was made by the aid of direct sunlight in the courtyard, to which both bed and patient were conveyed. The epiglottis was found to be excessively red and injected, but not swollen or œdematous. The whole left side of the larynx proper, however, was immensely swollen, and the mucous membrane of a dark livid colour. The right half of the larynx was somewhat congested, and the glottic chink was pushed over and lay obliquely towards the right, but a small portion of the right vocal cord could be seen.

With the aid of the mirror and Mackenzie's lancet, I cut deeply into the œdematous mass in the larynx. About a teaspoonful of dark blood escaped, but such a terrible spasm of dyspnœa resulted that for a moment I thought the patient would succumb. The spasms before this had been frequent but not very alarming. Recourse was had immediately to steam inhalations of compound tincture of benzoin, and blisters and poultices applied over the thyroid cartilage externally. With great difficulty a mixture containing bromide of potassium was swallowed, as the act of deglutition invariably brought on a paroxysm of dyspnœa. In a day or two the urgent symptoms had passed off, and the case subsequently did well. When I last saw him (more than two years after the operation) he had no respiratory trouble, but his voice was hoarse, and he had tumefaction of the left crico-arytænoid articulation, with fixation of the corresponding vocal cord in the cadaveric position.

Remarks.—This case may be put down as one of very acute laryngitis propagated from an erysipelatous pharyngitis, and the paroxysms were frequent and dangerous owing to the acuteness of the laryngeal complication. The permanent injury to the crico-arytænoid articulation is not to be wondered at when we consider the delicate construction of this joint and the septic nature of the inflammation propagated from the pharynx.

CASE 3. *Acute œdematous laryngitis of three days' duration; cause uncertain; extensive œdema of the epiglottis and upper rima glottidis; scarification, with immediate good result.*—C. M——, a Scotch gentleman, aged thirty-six. No history of previous illness, nor had he ever suffered from his throat before. I was called to see this case in consultation with Dr. Ayer, at half-past nine o'clock one morning. I found the patient sitting up in bed with a most anxious expression of face, great inspiratory dyspnœa, short dry cough, dysphagia, complete aphonia, quick pulse, skin moist, pale face, and a temperature of 101°. The illness, which was only of two days' duration, had begun with hoarseness and dysphagia; fever, with headache and loss of appetite, had also been noted. He had passed a sleepless night, was very restless, with threatening paroxysms of dyspnœa, and had got rapidly worse since five o'clock in the morning. Examination, by means of direct sunlight, revealed a normal pharynx. But the epiglottis was immensely swollen and congested, especially its laryngeal surface, which resembled a roll of sausage of a dark purple colour. A glimpse only of the posterior part of the upper rima glottidis could be obtained, which showed a certain amount of swelling and congestion there also; the rest of the larynx was completely hidden by the swollen epiglottis.

As the symptoms were very urgent, I at once punctured the epiglottis with a Mackenzie lancet, but the tough tissue of the epiglottis appeared to resist, and only a few drops of blood escaped. I went home to get a more powerful instrument, and on my return at 11.30 I found that several severe paroxysms had taken place, necessitating the use of nitrite of amyl. The second operation was more successful, about a drachm of dark blood escaping. Blistering and steaming inhalations were then used as in the other two cases, but no bromide was given owing to the dysphagia produced by the swollen epiglottis. The dyspnœa gradually became less, and

no more paroxysms took place. The urine was found to be albuminous, and the temperature remained above 100° for nearly a week, although the throat gave no more trouble, and the voice was completely restored in a fortnight.

Remarks.—The etiology of this case is by no means clear in the face of what authors state—namely, that the occurrence of extensive œdema of the larynx in simple uncomplicated acute laryngitis is extremely rare. In this case there was a history of rigor at the commencement of the illness, but there were no other symptoms of an influenza type present. The presence of albumen in the urine and the continued high pressure made me suspect an acute diphtheria at first, but a most careful laryngoscopic examination failed to show the presence of any membranous deposit. From the acuteness of the attack, the great swelling in the larynx, and the lingering convalescence (three weeks), with feverishness, I, however, concluded that some zymotic or other septic cause must have been at work.

Buenos Ayres.

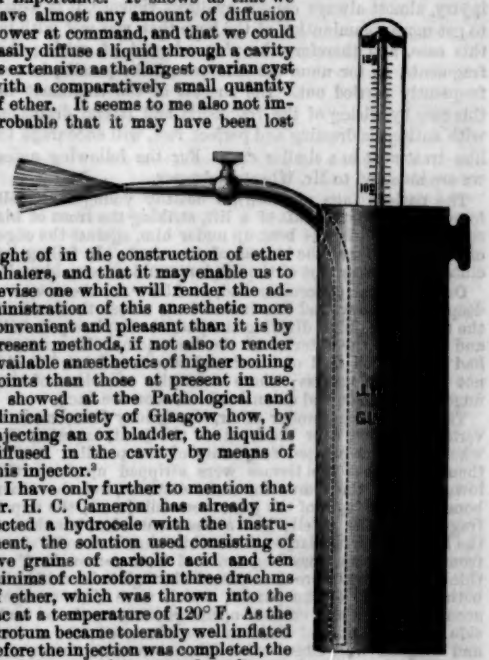
ON A NEW SYRINGE OR INJECTOR FOR SURGICAL PURPOSES.[1]

BY ROBERT KIRK, M.D. EDIN.,
OUT-DOOR PHYSICIAN-ACCOUCHEUR TO THE GLASGOW WESTERN INFIRMARY.

THE object of this instrument is to produce perfect diffusion of liquids injected into closed cavities. With our present appliances we have no means of doing so, and in the case of hydrocele we resort to shaking and manipulation of the scrotum for this purpose—a proceeding, however, which is impossible where internal cavities are concerned. Now, it is a matter of daily observation that liquids are driven and widely diffused by means of vapour, an illustration of which is the familiar phenomenon of a pot "boiling over." Nearly two years ago it occurred to me that in ether, which boils below the temperature of the blood—namely, at 95° F.,—we had an agent exactly suited to the purpose in view. Accordingly I proceeded to treat such cases of hydrocele as came in my way by injecting the sac with ethereal solutions of carbolic acid, heating the liquid to near its boiling point before injection. The acid has been somewhat extensively used for hydrocele in America, though in much larger quantity than I thought necessary, and I have never exceeded five grains in each case. Of four cases thus treated the first three were very successful; the pain was much less than with the iodine treatment—indeed, was practically *nil*, while the recovery was rapid, the patients being allowed to resume their ordinary employments in a week. It is now seven months since the last of these cases was treated, and there has been no return of the affection in any of them. The ordinary piston-syringe, however, proved in all the cases a very unsatisfactory instrument for the purpose, as it was very difficult to draw heated ether into it; and the failure of my fourth case, which was complete, the effusion returning in a few months, was entirely due, as I believe, to the extremely faulty action of the piston on that occasion. This led me to devise the injector I am about to describe.

Experiments in injecting the urinary bladders of oxen with ethereal solutions, while they were held in a vertical position, having shown that a temperature of from 110° to 120° F. was necessary to produce perfect diffusion of the injected liquid, with inflation of the viscus, it occurred to me that the vapour-pressure of ether would of itself be sufficient at this temperature to drive the liquid, and this principle will at once explain the construction of the instrument. It consists, as represented in the accompanying woodcut, of a cylinder into which passes a tightly-fitted thermometer, and which is further provided with a filling aperture, closed by a screw stopper, and lastly, with an exit tube which dips down to the bottom of the cylinder. This tube is furnished with a stop-cock and terminates in a nozzle with a very fine aperture, and of such a size as to fit into an ordinary hydrocele cannula. The vapour-pressure within this cylinder acts on the liquid and drives it through the tube, and the vapour alone cannot escape till all the liquid has been driven out. Such is the vapour-pressure of ether that the heat of the hand expels the liquid with considerable force; at 80° F. it is driven out in a stream six or seven feet long, and at 85° the internal pressure is sufficient to expel all the liquid which the vessel can hold when full. Ether can also be made to drive other liquids at temperatures quite comfortable to the body. Three parts of rectified spirit and one of ether produce sufficient pressure at 120° F. to completely empty the cylinder; and at about the same temperature seven parts of water and one of ether (the latter in this case partly going to form a layer on the surface of the water) are completely driven out. Water dissolves one-tenth its volume of ether, and the value of this addition of the highly volatile agent to it, by enabling it to penetrate cavities and permeate tissues more deeply, must be abundantly obvious.

Here let me draw attention to a fact, although it is one depending on well-known general principles—namely, that though the ether may be superheated in the cylinder, it instantaneously cools on being liberated, so that the hand can be comfortably held in the stream when the thermometer stands at 212° F. This fact may lead to some applications of importance. It shows us that we have almost any amount of diffusion power at command, and that we could easily diffuse a liquid through a cavity as extensive as the largest ovarian cyst with a comparatively small quantity of ether. It seems to me also not improbable that it may have been lost sight of in the construction of ether inhalers, and that it may enable us to devise one which will render the administration of this anæsthetic more convenient and pleasant than it is by present methods, if not also to render available anæsthetics of higher boiling points than those at present in use. I showed at the Pathological and Clinical Society of Glasgow how, by injecting an ox bladder, the liquid is diffused in the cavity by means of this injector.[2]



I have only further to mention that Dr. H. C. Cameron has already injected a hydrocele with the instrument, the solution used consisting of five grains of carbolic acid and ten minims of chloroform in three drachms of ether, which was thrown into the sac at a temperature of 120° F. As the scrotum became tolerably well inflated before the injection was completed, the operation was interrupted, and some vapour and liquid allowed to escape before the remainder in the cylinder was injected. Some liquid was again allowed to escape in the same way—perhaps, indeed, rather too much,—and, as we afterwards thought, quite unnecessarily. The result will be carefully watched and recorded.

Since the foregoing was written the injector has been used, at the suggestion of Dr. Cameron, and with a very good result, to syringe the bladder in a case of subacute cystitis, of which careful notes have been kept. I have also used it to syringe the ears, in this case driving nine parts of water by one of rhigolene, which boils at 80° F. For a vaginal douche the instrument seems to me to be well adapted, the injection of water containing one-tenth of ether at 100° or 110° (along with any antiseptic that may be thought necessary), offering a considerable advantage over ordinary methods.

[1] Subject of a paper read before the Pathological and Clinical Society of Glasgow, March 9th, 1886.

[2] A bladder suspended vertically, and capable of containing 100 oz., was injected and inflated with an ethereal solution of picric acid, and it was shown that the acid was deposited over the entire inner surface of the bladder.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

COMPOUND FRACTURE OF THE PATELLA INTO THE KNEE-JOINT; SUTURE OF PATELLA; RECOVERY.

(Under the care of Mr. SYDNEY JONES.)

COMPOUND fracture of the patella is not an injury of frequent occurrence, and it is important to record the treatment of those cases which do occur. On March 18th of this year a paper was read before the Harveian Society [1] on this subject, and only nineteen cases were mentioned by the reader of the paper as already on record. In cases of this injury, almost always caused by direct violence, it is usual to get more comminution of the bone than was met with in this case, and therefore the plan adopted of wiring the fragments, as for ununited fracture of the patella, is not frequently carried out. The success of the treatment in this case by wiring of the fragments and lateral drainage, with antiseptic dressing and perfect rest, will encourage to like treatment in a similar case. For the following notes we are indebted to Mr. Wheaton, dresser.

The patient (age nineteen), a healthy young man, fell forty feet down the shaft of a lift, striking the front of his right knee, which was bent up under him, against the edge of an iron girder at the bottom of the shaft. In falling he clutched the wire rope of the lift, but could not stop himself.

On admission (December 2nd, at 8.30 P.M.) there was a deep transverse wound five inches long across the front of the right knee-joint, dividing the patella completely in half and exposing the interior of the knee-joint. The patient had lost a good deal of blood and was very faint, but did not lose consciousness; there were also abrasions of the fingers and hands, and extensive bruises on the back.

The patient being under ether, Mr. Sydney Jones made a vertical incision over the front of the joint, exposing the whole of the separated fragments of the patella; it was then found that the tissues were stripped up from the lower end of the femur for some distance, but the other bones and cartilages of the joint were uninjured; the upper fragment of the patella had a clean-cut edge, but that of the lower was irregular, so that a thin slice had to be sawn from it and some loose fragments of bone removed. Two thick silver wires were then passed through holes drilled in both fragments of the patella, which were then brought accurately together; counter-openings were made on each side of the joint, and drainage-tubes inserted; the wound and incision were closed with silk and catgut sutures, and the joint dressed with iodoform gauze and salicylic wool and put up in a straight "excision" splint.

Dec. 3rd.—The patient has recovered well from the effects of the operation, and feels comfortable, but very drowsy. The temperature in the evening rose to 101·4°, when the joint was dressed antiseptically.

5th.—The temperature, which had remained at about 100°, rose to 102·2°; wound dressed, looking very well; very little discharge; no pain; patient takes milk and beef-tea well.

6th.—The patient feels feverish and thirsty; bowels confined. Temperature last night, 103°; at noon to-day, 102·6°; wound dressed; alternate sutures withdrawn; no distension of joint; no bagging; a fair amount of discharge, quite aseptic.

8th.—He complains of pain in the knee; tongue furred; bowels confined; pulse 130; temperature 100·8°; wound dressed; a good deal of superficial inflammation around it; a small collection of pus on the outer side of the patella discovered and evacuated.

12th.—Wound again dressed.

14th.—He coughed up a good deal of tenaceous sputum and frothy blood; no pain in the chest; cough slight; nothing abnormal was detected in the chest. Temperature at night 101·4°. He was given five grains of sulphate of quinine three times a day.

16th.—Patient improving; another superficial collection of pus on the inner side of the patella; a good deal of discharge from the joint.

22nd.—The temperature was normal morning and evening, and the patient improving rapidly.

30th.—All the drainage-tubes withdrawn; the tibia was found to be falling back to the extent of three-quarters of an inch, and the malposition was corrected by a pad placed under its upper end.

Jan. 6th.—Antiseptic dressing left off; the wounds are now quite superficial; there is a great deal of inflammatory thickening about the joint; no pain.

Towards the end of January the temperature suddenly rose to 106°, and there was a slight rigor. A large dose of quinine was given, and it had fallen next day to normal. The joint appeared to be progressing favourably, and no complaint was made by the patient. After this time the patient gained strength rapidly, and on Feb. 15th could get about on crutches fairly well. On Feb. 20th he went out; wounds firmly cicatrised; swelling around joint subsiding; patella a little lower than normal; can be shifted laterally, but not upwards or downwards; he can flex the knee about two degrees; no abnormal lateral movement; no hyper-extension possible, the limb being quite straight; no rotation or falling back of the tibia; patient was going about well with crutches and splint; the leg became swollen a little towards evening. He was again seen on May 3rd; there was now no swelling of the leg, but no attempts had been made to flex it. He was anxious to resume work, being able to walk without stick or crutches.

[1] THE LANCET, vol. i., 1886, p. 642.

LEEDS GENERAL INFIRMARY.

CASES OF COMPOUND FRACTURE.

(Under the care of Mr. MAYO ROBSON.)

THE following reports have been abstracted from notes furnished by Mr. Ashton Street.

CASE 1. *Compound Fracture of Patella, with Wound of Knee-joint; Recovery with useful joint.*—J. P——, aged thirty-five, a coachman, was kicked by a horse on the right knee on Dec. 2nd, 1885, and admitted two hours afterwards, when there was found to be a wound of 1½ in. over the front of the right patella, which was the seat of a starred fracture; a probe passed freely into the knee-joint. It was syringed well with perchloride solution (1 in 2000), and dressed antiseptically, no drainage-tube being employed; the limb was fixed on a back splint. Temperature normal throughout. Dressed for the first time on Dec. 12th, ten days after the accident, when the wound was healed. Made an out-patient Dec. 29th, plaster-of-Paris having been applied from the calf to the middle of the thigh, this being left on to steady the limb for three weeks. In March, 1886, he was quite well and able to perform his duties perfectly, the injured knee-joint moving as freely as the uninjured one.

CASE 2. *Compound Fracture of Humerus, with Wound of Shoulder-joint; Recovery with good joint.*—W. C——, aged forty, carpenter. On Dec. 3rd, 1885, while at work, a circular saw broke in two and one half struck his shoulder, knocking him down. When admitted to the infirmary a few hours afterwards, there was found to be a large wound of about seven inches reaching from the tip of the acromion down the arm through the deltoid. The shoulder-joint was laid open, the tip of the acromion was cut off, and the upper end of the humerus was the seat of a severe comminuted fracture. All the parts were thoroughly cleansed and then syringed with perchloride lotion (1 in 2000); two drainage-tubes were inserted, and the wound was brought together with catgut sutures. The arm was fixed to the side with the hand across the chest. The wound progressed favourably, and on Jan. 19th, when it had nearly healed, the arm was freed from its bandages and he was allowed to return home. On March 28th the patient reported himself, with the wound healed and with good movements in the joint, he being able to raise his arm above his head, and to rotate it freely and to place his hand behind his back.

CASE 3. *Compound Dislocation of Left Astragalus, with Fracture; Recovery, with useful joint.*—J. S——, aged thirty-one, a miner, was run over by a waggon and admitted

to the infirmary within a few hours of the accident with a wound over the inner ankle running from the anterior border of the internal malleolus round the back of the heel to the outer border of the tendo Achillis; through the wound the astragalus was protruded. The internal lateral ligament was but slightly injured, and on this, as a hinge, the astragalus was turned with its upper surface downwards, having been completely torn away from the external lateral ligament; the outer articular surface was broken, but there was no fracture of the malleoli. The flexor longus pollicis tendon was torn from its muscle and had to be removed; the posterior tibial artery was torn, though not bleeding, but the nerve was not injured. After enlarging the wound, the astragalus was separated from its attachments and removed, and the wound was then well syringed with perchloride solution, a large drainage-tube being inserted. It was dressed antiseptically and put up on an anterior wire splint. The wound, which was in a very dirty condition when he was brought in, was evidently not fully aseptic ised, for it suppurated, and the matter collecting by the side of the tendo Achillis had to be let out by incision. He made a slow recovery, and was discharged on Feb. 5th with a limb which promised to become a very useful member.

CASE 4. *Compound Fracture of Humerus, with Split Fracture into Elbow-joint; Recovery with freely movable joint.*—A. B——, aged ten, a schoolboy, was admitted on July 16th, 1885, six hours after being thrown down by a companion, when there was found to be a wound of 1½ in. in front of the lower end of the humerus just above the flexure of the elbow, communicating with a very loose split fracture opening the elbow-joint, the muscles being much torn. The wound was syringed with perchloride lotion, and dressed antiseptically, a drainage-tube being inserted. The limb was placed on an internal rectangular splint. He was made an out-patient on Aug. 11th, with the wound almost healed, but with much callus around the seat of fracture, impeding the movements in the elbow. The splint was left off five weeks after the accident, and friction and passive movements employed. When seen in February, 1886, all the movements of the joint were very good. He had no pain, and the fracture was quite sound.

Remarks by Mr. MAYO ROBSON.—Before the introduction of antiseptic surgery such injuries would probably have required primary amputation; or even, if at considerable risk to life attempts had been made to save the limbs, suppuration must have occurred in and around the articulations leading to ankylosis, if not necessitating secondary amputation. The chief difficulty is in rendering wounds of this nature aseptic, since the skin is as a rule greasy and dirty, and the muscles and bones are often covered with grit and foreign matters. To effect this the skin is well rubbed with turpentine, which removes the grease and renders it clean and aseptic; and after all foreign matters have been picked out, or if needful scrubbed away by means of a brush, the wound is very freely syringed out over and over again with perchloride lotion (1 in 2000) by means of a Higginson's syringe. A drainage-tube and sutures having been inserted if needful, the wound is covered with a single layer of gauze soaked with perchloride lotion, and over this dry dressings of salicylic wool or silk are applied, the chief guiding principles in the after-treatment being infrequent dressings and fixation of the limb until healing has taken place, after which friction and passive movements help to restore impaired functions.

TIMARU HOSPITAL, NEW ZEALAND.

TWO CASES OF COMPOUND DEPRESSED FRACTURE OF THE VAULT OF THE SKULL; TREPHINING; RECOVERY; REMARKS.

(Under the care of Mr. H. V. DREW.)

CASE 1.—Alex. D——, aged forty-two, a farmer, was admitted on Feb. 15th, 1885. When seen, a few minutes after admission, he was sitting up in bed and quite sensible. He nodded and smiled when spoken to, and in answer to questions said that a heavy horse had reared, and in coming down had struck him on the head with one of his fore-feet, which stunned him for a few minutes, and when he tried to get up he found himself paralysed all down the right side. On removing the dressing from his head a pulsating area the size of half-a-crown was visible, and on examination under chloroform, which was kindly administered by Dr. Hogg, the bone was found to be sunk right into the brain, the same having "welled up" over it. Not being able to remove the bone, Mr. Drew used a small trephine at the extreme margin of the fracture, which enabled him to remove all the fragments—also about half an ounce of brain matter, as near as could be judged, this being completely disorganised. All foreign matter, clots, &c., having been removed and the wound washed out gently with a 1 in 40 carbolic solution, the scalp was laid down without sutures of any sort, a piece of Lister's protective covering the wound; over this was placed a piece of lint wrung out in a 1 in 40 carbolic solution, and then a piece of iodoform wool, with one layer of bandage under the chin and over the head to keep things in their place. Irrigation with a 1 in 40 carbolic iced solution was resorted to, but this had to give way to rectified spirit lotion, as symptoms of carbolic poisoning began to manifest themselves. The patient did not vomit at all. His food consisted of iced milk and chicken broth, with bread later on, and the only medicine he had was an occasional dose of calomel. On the thirteenth day he could flex his previously paralysed leg; on the twenty-fifth day he could extend the same. On the twenty-seventh day he began to recover the use of his arm (flexion only), and on the thirtieth day he could extend the same, though he had not yet recovered the power of pronation or supination. On the thirty-second day he had a bilious attack, and his temperature rose to 101° F. and his pulse to 150, but fortunately by the use of calomel both were reduced in forty-eight hours to normal.

The patient during this attack never vomited in the ordinary acceptance of the word, for he has the power to cause his food to regurgitate at will; and by so doing he avoided the risk which forcible vomiting might have caused him to incur. At the end of eight weeks the patient had recovered all the movements of his arm and leg. The wound had long since healed, though a pulsating area about the size of half-a-crown is visible. The injury was seated over the ascending parietal convolution, and lobule of same (left) as near as could be judged. The wound was perfectly antiseptic, though Lister's dressing could not be accurately adhered to. The wound was dressed every day under a continuous dripping of 1 in 40 carbolic. No sutures were employed, accurate union was effected, and the wound was left alone. The temperature never rose above 99° F., except during the bilious attack. The recovery of flexion before extension of each limb is noteworthy, also the later return of the more complex movements. Slight bagging of the scalp at the back of the head was noticed, presumably due to the escape of subarachnoid fluid, but was soon completely absorbed. The pulse fluctuated between 50 and 90 (except during the bilious attack), and the greatest difficulty met with in conducting the case was the regulation of the bowels. In February last the patient was still well, and was doing hard work.

CASE 2.—John L——, aged forty-five, nurseryman, was admitted on Jan. 2nd, 1886, suffering from the effects of a blow from a 16 lb. hammer, received at the Caledonian Sports. On admission he was found to be conscious and suffering somewhat from shock and a lacerated wound found over the right frontal bone, the greater part of the latter being depressed. The fracture was very extensive, and there was bleeding from the nose, the right eyelid being very tense from extravasation of blood. Dr. Hayes of Temaka was with Mr. Drew at the time, and kindly assisted; and as he agreed as to the advisability of trephining, the operation was at once proceeded with. A small piece was removed with the trephine, and then the large depressed part was raised, and, after some little difficulty, kept in position. The skull was found to be excessively thick (three-eighths of an inch). The scalp was laid down when the bleeding had ceased, and silver sutures were used to unite the incised portion of the wound, the posterior or lacerated part being left open and a small drainage-tube inserted. The wound was dressed as in Case 1, and the patient put upon a clean bed. Towards the end of the operation the patient vomited a large quantity of altered blood, and the vomiting of blood continued throughout the night in spite of sucking ice.

Next day the wound was dressed as before, and the tube cleaned and replaced; no depression was noticeable, and things looked well; pulse 60; temperature 98° F. No vomiting occurred after this. A little milk-and-water (iced) and a little thin gruel were taken. Evening temperature 99·4°. The patient remembered nothing about being brought in or about the operation, though he spoke quite rationally at the

time. He sees "double," and is completely deaf on the right side; has numbness of skin of forehead, and complete loss of sensation over the area of distribution of the infra-orbital nerve, also of the right lower part of face; his taste is also much affected. Mr. Drew therefore concluded that taken with the vomiting of blood that he had a fracture of the base, as well as the fracture described.

On the sixth day the sutures were completely removed, and on the seventh day the drainage-tube, which had been shortened from time to time. On the twenty-seventh day the patient was sitting up in bed, the wound having been healed for some days. The highest temperature was 99·8° F. on the seventh day, and has since been normal. Hearing has returned, taste and sensation of skin of face much improved, and vision is normal. Patient feels as well as before the accident, and there is no mental or physical defect. He left the hospital on Feb. 2nd, 1886, exactly one month after admission.

Remarks by Mr. DREW.—I attribute the successful results in these two cases, both of which were of extreme severity, and both only forty-two years of age, to the following causes: Symptoms were not waited for, but both patients were immediately trephined; depressed bone was known to exist, and though if left it *might not* cause symptoms, if elevated or removed it *could not*. The ordinary Listerian dressing was not used, as it was feared that the bandaging &c. would not conduce to coolness, and the pressure would have been injurious; but by applying the dressing as described in Case 1, and redressing every day without interfering with the wound, and under a constant dripping of weak carbolic lotion, the same principle was adhered to with precision. Very great care was observed with the food, very little being given for the first week; no friends were admitted for a fortnight, and the patients were kept perfectly quiet in a well-ventilated room and in a subdued light, and the bowels were carefully regulated every third day. The cold lotion undoubtedly retarded the healing process, but this was more than counterbalanced by the immunity from risk of inflammation of brain it ensured, and also the freedom from pain or even discomfort of the patient. I wish to acknowledge my obligation to Drs. Hayes, Hogg, MacIntyre, and Longrove for their kind assistance.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Obliterative Tracheitis and Bronchitis in Congenital Syphilis.—Pathological Histology of Hydrophobia.—Granuloma Fungoides.—Hepatic Abscess secondary to Pelvic Inflammation.—Primary Cancer of Thyroid.—Double Intestinal Stricture.—Spinal Abscess, destroying Kidney and opening into Duodenum.—Psoas Abscess, with formation of New Bone in Sinus.—Tubercular Arteritis.—Malignant Growth of Lip, with Melanosis.

AN ordinary meeting of this Society was held on Tuesday last, Dr. J. S. Bristowe, F.R.S., President, in the chair. The meeting began half an hour earlier than usual. As the executive are endeavouring to complete the work of the session, the next and last meeting is also to commence at 8 instead of 8.30 P.M.

Mr. R. W. PARKER showed specimens of a case of Obliterative Endo-tracheitis and Bronchitis. They were removed from the body of a boy aged fifteen years, the subject of congenital syphilis. He had first came under observation on account of endosteal nodes on both tibiæ, and of a tracheal fistula dating back three or four years, when he was tracheotomised for syphilitic laryngitis by Mr. Elkington of Birmingham. He continued to wear a tube for many months; on its withdrawal the opening had remained patent. It was thought not improbable that the irritation of fine foreign matter (dust, &c.) entering the lungs through this fistula had first started the condition about to be described. Commencing about an inch above the bifurcation, the lumen of the trachea suddenly began to narrow in a more or less uniform manner; a little lower down this narrowing became less uniform but more marked, so that the lumen was reduced to about one-third of its normal size. The left bronchus was almost entirely occluded. The occluding new growth consisted of well-formed fibrous tissue surrounding and separating the mucous glands, which appeared quite healthy. The changes in the trachea were strictly endo-tracheal; those in the bronchi were partly endo-bronchial and partly peri-bronchial, the latter, it was thought, being secondary to interstitial pneumonia set up by the retained secretions. Both lungs were in an advanced state of bronchiectasis. The extent of the occlusion of the lowest part of the trachea and of the primary bronchi was very remarkable, the available area for breathing purposes being little more than that of a large quill. The resemblance of this condition to endarteritis was remarked upon. In reply to Dr. Bristowe, Mr. Parker said that, so far as he knew tracheotomy did not lead to cirrhosis of the lung.

Dr. HALE WHITE showed a series of specimens illustrating the Pathological Histology of Hydrophobia from two men and one dog. The medulla oblongata was in a state of acute inflammation, for the most part limited to the floor of the fourth ventricle and the subjacent nerve-tissue for a depth of about one-third of the thickness of the medulla. It was most marked in the median line on either side of the posterior median fissure. The result of this inflammation was a general blurring of the nerve tissue, so that the normal arrangement of fibres and cells could not be made out; there were many small inflammatory cells in tissue, and under a high power of the microscope they could be seen in large numbers crowding through the walls of the vessels. The inflammatory exudation had a tendency to run in directions determined by the nerve fibres. The nerve cells were implicated, and in many places blurred and indistinct; the nuclei most affected were the vagal and hypoglossal. The dilatation of the minute vessels was extreme, and had in many cases led to their rupture; the hæmorrhages thus produced were all microscopic, and were most numerous immediately under the floor of the ventricle, so that blood could often be seen to be effused into the meshes of the pia mater, but in no place was this membrane itself ruptured. The same condition was observable in other parts of the brain, but to a much less degree, and it could be also seen in the cord to a slight extent. Thus, it will be gathered that the essential lesion in hydrophobia is an acute inflammation of the floor of the fourth ventricle, and that this spreads slightly upwards to the brain and downwards to the cord. In the salivary gland there was some blurring of the secretory epithelium, and a few leucocytes could be seen wandering about among the gland constituents. In one case there was an atrophic condition of the thyroid gland. The vagus and sympathetic nerves and every organ in the body were examined, but they were all found to be healthy with the exceptions just mentioned.

Dr. PAYNE showed drawings and microscopic specimens of Granuloma Fungoides from a man aged fifty-six. The cutaneous affection consisted of scattered, large, red, scaly patches, which became dark red and then brown, and looked like psoriasis or scaly eczema; but, in addition, there were, sometimes replacing the patches, tumours of hemispherical shape, from half a walnut to an orange in size. The man was born in the country, but had passed thirty years in London at a railway station. The diagnosis presented some difficulty, and leprosy was thought of. It was, however, like that described by Alibert as mycosis fungoides, and by others as lympho-sarcoma and general sarcomatosis. A case was recorded under the name of leprosy in the twentieth volume of the Transactions which Dr. Payne regarded as a granuloma fungoides. The internal organs were healthy. The tumours only invaded the skin, and consisted of an infiltration of small round cells, which had essentially the same structure as that of the scaly patches; there was also some evidence of a new formation of connective tissue without giant cells; the structure was not specially lymphatic, and the cells differed from those of sarcomata. Micrococci had been described by Auspitz of Vienna as a copious infiltration of the cells; but the evidence of their nature was not conclusive. Rindfleisch had discovered an undoubted streptococcus, but only within the vessels; these were certainly not present in Dr. Payne's specimens. The foreign observations being post-mortem specimens, the presence of micrococci could be easily accounted for.

Mr. F. S. EVE showed a specimen of Granuloma Fungoides of the Foot. It was limited to the skin and projected from the dorsal surface of the foot; a warty condition existed along the inner margin of the growth, and this papillary condition extended nearly up to the knee. The patient was a man aged fifty-three, a merchant, who had had cardiac disease and albuminuria for many years. There had been

lupoid-like growths on the left leg, which had left scars and a kind of spurious hypertrophy of the tissues. As the growth was considered to have become epitheliomatous, amputation of the limb was performed, and the patient made a good recovery. Later on a tumour appeared at the upper part of the right forearm, but this sloughed, and cicatrisation ensued; it was regarded as an intermuscular specific gumma by Mr. Hulke. In the buttock also a dense white firm tumour appeared, and exposed the ilium, which became partly necrosed. A sister of the patient showed signs of congenital syphilis. There were many differences from ordinary gumma in the tumour shown, the fibrous tissue being so abundant. As described by Auspitz, and obtained by Gram's method, there were many cells that stained blue in a remarkable way, but this was not due to micrococci.—The PRESIDENT did not think that Mr. Eve's specimen was of the same nature as the first.—Dr. T. ACLAND said that Mr. Ballance and himself had been unable by cultivation experiments to demonstrate the existence of any micro-organism. If these were present the outline of the cells would not be so perfect.—Mr. JONATHAN HUTCHINSON, jun., alluded to the case of supposed actinomycosis described by Mr. Treves; his father had a somewhat similar case at the London Hospital, in which the skin alone was involved with lupoid-like growths.—Dr. PAYNE replied that the stained points had nothing to do with nuclei in his sections; they were probably albuminoid granules, and related to vital processes, for they disappeared after death.—Mr. EVE said that in Auspitz's case a scaly eczema preceded the formation of the growth for seven years. He had detected the same kind of cells in syphilitic growths.

Dr. HANDFORD showed specimens of Hepatic Suppuration, probably due to pelvic suppuration, in a woman aged twenty-five, who had led an immoral life. Much pyrexia, cough, diarrhœa, and rigors were the chief clinical signs. The liver was very large and tender, but aspiration failed to strike pus. The necropsy showed a large extent of suppuration in the right lobe of the liver, which weighed 10lb. 6oz. The lobe was honeycombed in all directions, and around this many scattered pea-sized areas of abscesses were detected. There was no sign of hydatid. The spleen weighed 13oz., and the kidneys were much enlarged and flabby. There were abscesses in the caudate nucleus, and one damaged the anterior limb of the internal capsule, but caused no definite symptoms. The Fallopian tubes were distended with curdy purulent fluid. The sigmoid flexure was bound down to the back of the uterine fundus. The sequence of events was probably gonorrhœa, double pyo-salpinx, and pyæmia. In a case recently reported by Mr. Bilton Pollard the sequence of events was gonorrhœa, thrombosis of iliac veins, suppuration of hip-joint, thrombosis of pulmonary artery, and death.—Mr. STEPHEN PAGET said that from certain statistics of 400 cases of pyæmia he had come to the conclusion that the lymphatics had a large share in the distribution and arrangement of the lesions of pyæmia; and Dr. Tilt had published a paper in the Obstetrical Transactions on the importance of lymphangitis in pelvic pathology. The chances of the liver being affected if the bone were the seat of the lesion from which pyæmia developed were one in four, whereas if the bone were not involved the chances were one in twenty. He thought the lymphatic tissues were operative in this connexion, and not the veins, for in twenty cases of pyæmia after venesection only one had hepatic abscess, and that was where it had been performed for acute secondary syphilis.—Dr. S. WILKS considered that pyo-salpinx was a source of danger; in one he had seen brain disease follow, and in another septic pleuro-pneumonia. Morgagni had noticed that certain cases of Fallopian abscess followed gonorrhœa, and were a cause of sterility.—Dr. HADDEN said the description of the liver reminded him of actinomycosis. Had the author taken that view into consideration?—Dr. CARRINGTON said that the portal vein was healthy in instances of tropical abscess that he had seen. The lymphatics probably conveyed the contagium.—Dr. N. MOORE corroborated this view. In only one case had he seen the portal vein diseased.—Dr. HANDFORD had not specially examined for the actinomyces.—The specimen is to be investigated by Drs. Hadden and T. Acland.

Dr. NORMAN MOORE exhibited a specimen of Primary Carcinoma of the Thyroid from a woman aged forty-six, lately under his care in St. Bartholomew's Hospital. The new growth formed a huge mass, which had ulcerated through the skin and into the larynx. It completely compressed one recurrent laryngeal nerve, and pressed on both carotid arteries, and had grown through the upper wall of the arch of the aorta, but without causing extravasation of blood. Secondary deposits were found in the kidneys, on one rib, and in the brain. All the deposits showed great mixture of cells, but in them were groups of well-marked epithelial type, surrounded by numerous connective tissue cells, but with a very ill-developed stroma. The growth seemed to be of epithelial type, probably originating in the walls of the loculi of the thyroid. The duration of the growth was about four months. On the patient's admission to the hospital a large cyst projected from the right lobe, and from this blood-stained fluid was let out, but it rapidly refilled. After a month in the hospital the tumour began to approach the surface, and broke through in a few days as a fungating mass. There was some dysphagia and partial aphonia, but never urgent dyspnœa.—Dr. F. SEMON said malignant growths of the thyroid gland were by no means so rare as was supposed; at least a dozen had been recorded in the past year.—Mr. SUTTON said there were no theoretical objections to the development of cancer in the thyroid gland, for it was of hypoblastic origin.—The specimen was referred to the Morbid Growths Committee.

Dr. CARRINGTON brought forward two cases of Double Stricture of the Intestine. The first was in a man aged forty-nine, who was admitted into Guy's Hospital on Dec. 28th, 1885, under the care of Mr. Bryant. The history was, briefly, that since the previous August he had suffered from griping abdominal pain and obstinate constipation. A mass of growth could be readily felt per anum. Colotomy was performed in two stages, but the operation afforded him no relief, and he died on Jan. 6th. At the necropsy a well-marked cancerous growth with thick everted nodular edges and ulcerated surface was found four inches up the rectum. The stricture was very tight. A second growth with the same characters was found surrounding the ileo-cæcal orifice. No secondary nodules were found in the body. The second case was more complicated, but presented the feature of a double intestinal stricture. The patient was a female aged sixty-one, and was admitted on Oct. 15th, 1885, much wasted and careworn and deeply jaundiced. The illness had commenced ten months before by abdominal pain. She became jaundiced on Sept. 28th. She was obstinately constipated throughout, but only vomited on two occasions—viz., Oct. 10th and 11th. With the exception of a nodule in the tissues surrounding the umbilicus, which was thought to be cancerous, no objective cause of the jaundice was discovered. The viscera on admission all appeared to be healthy. On Dec. 25th the pain became much intensified and the abdomen very tender, and she died the next day. On opening the abdomen fæcal extravasation and acute peritonitis were discovered. The bowel had given way just above the uppermost of two strictures, which were situated three feet above and one foot below the cæcum respectively. The strictures were quite narrow and annular, triangular on section, with the bases on the peritoneal surface. There was scarcely any lumen to the bowel at the upper stricture, and the calibre of the colon at the site of the lower one was certainly not more than half an inch. The gall-bladder contained two facetted gall-stones. The common bile-duct was surrounded by a nodule of growth of the size of a walnut, which had invaded the liver by continuity. The liver weighed 32 oz., and contained a few secondary nodules. There was much thickening and puckering in the portal fissure. The ovaries contained one or two small nodules. No other disease was found.

Mr. DAVIES-COLLEY exhibited the Lumbar Spine, with the Right Kidney and the Duodenum, of a woman aged twenty-four, who had come under his care in Guy's Hospital with angular curvature of the lumbar vertebræ, accompanied by excessive pain in the right lumbar and iliac regions and in the upper part of the right thigh, but without any distinct fluctuating swelling. Under an anæsthetic a lumbar incision was made, and the side of the body of the third lumbar vertebra exposed. Nothing flowed at the time, but in the evening there was a free discharge of foul and turbid pus. No relief of the pain followed. The copious suppuration continued, and was thought to be stercoraceous. In eleven days the patient died, and was found to have extensive disease of the last lumbar vertebra, and, to a slight extent, of the fourth. The right kidney was disorganised, and there was a perforation of the second portion of the duodenum just below the entrance of the common bile-duct. The chief points of interest in the case were: 1. The want of correspondence of the angular projection, which was formed by the spine of the second, third, and fourth lumbar

vertebræ, with the disease, which had utterly destroyed the body of the fifth and only slightly attacked the fourth lumbar vertebra. 2. The absence of any pus in the urine to indicate the destructive process going on in the kidneys. This was probably due to the occlusion of the ureter having preceded the renal suppuration. 3. The remarkable clinical results due to the perforation of the duodenum. The suppurating cavity appears to have discharged itself by the opening, and in consequence there was no fluctuating swelling in the usual sites of spinal abscess. At the same time, excruciating pain was set up by the food getting into the abscess cavity. This still continued after the operation, and probably the escape of the food through the wound increased the weakness of the patient.

Dr. A. Q. SILCOCK showed a Psoas Abscess with formation of new bone in the wall of the sinus, taken from a child aged five. The psoas abscess was right-sided, and in the wall of the sinus were plates of bone of spurious nature, the canalicular systems not being properly developed. Perhaps the liability to formation of bone in the tendon of the psoas, the quantity of lime salt passing by, and the tendency of chronic inflammation to form bone, were sufficient reasons for the development of the bony plates.—Mr. SHATTOCK raised the question of actinomycosis in Mr. Davies-Colley's case. The communication of the duodenum with the cavity of the abscess reminded him of the description by Israel of cases of primary infection of the intestines with secondary caries of the spine.—Dr. CARRINGTON said that the perforation of the duodenum was so obviously recent that Mr. Shattock could not hold the actinomycotic view if he had been present at the necropsy.—Mr. DAVIES-COLLEY replied in the same strain.

Dr. C. TURNER showed a specimen of Aneurysm of a branch of the Pulmonary Artery in an old cavity in the Apex of the Left Lung, from which rapidly fatal hæmorrhage had occurred. In the lung were also several wedge-shaped masses of recent consolidation and old fibroid areas. The specimens were obtained from a child aged six, who had suffered from pulmonary symptoms for two years and a half since an attack of measles. She had been failing in health for twelve months, and had had occasional attacks of hæmoptysis. She had not been laid up until four months before her death. She improved under treatment, but the symptoms returned with progressive severity a few weeks before death occurred from profuse hæmorrhage, of which there had been no warning. Sections from the neighbourhood of the cavity show great proliferative thickening of the inner coat of the pulmonary arterioles in and adjacent to caseous tracts, and much nuclear infiltration and proliferation of the outer coat of the arterioles and of the interlobular and interalveolar connective tissue, and of that around the caseous tracts and nodules, which contain many giant cells of the kind seen in tubercular lesions. A button-like elevation, which appeared to be another small aneurysmal bulging on a branch of the pulmonary artery, was to be seen in the wall of the cavity near the first. The specimen was regarded as an instance of rupture, and possibly of the formation of such aneurysms as were incidental complications of a progressive phase of a chronic pulmonary lesion, attributable to weakening of the walls of the pulmonary arterioles by peri-arteritis, unattended by obstructive end-arteritis of corresponding degree, such as might have produced the cavity and wedges of consolidation and fibroid induration seen in the lungs. The right lung was completely fibrous and retracted. There were cavities in the upper lobe, but no miliary tubercles in the lungs or abdominal viscera. The child's paternal grandparents had both died young, but there was no other evidence of phthisis in the family.

Dr. F. W. MOTT exhibited a specimen of Malignant Melanotic Growth of the Lip from a single woman, aged thirty-seven. It had grown from the upper lip for two weeks when first seen, and had a purplish aspect, softened in the centre and hard at the periphery; no pulsation or induration. The mucous membrane was unaffected. After six weeks the growth was removed, having attained the size of a walnut, by a V-shaped incision. At the end of ten weeks the right cheek and right submaxillary gland were involved with new growths, and another nodule appeared behind the right ear. In four months the scar showed signs of recurrence and the left submaxillary gland became involved. Later still, a fresh nodule appeared at the left of the occipital protuberance; the patient became deaf first on the right and then on the left side. Hæmorrhage frequently recurred, and she died exhausted by it at the end of one year and ten months from the first appearance of the growth. The internal organs were healthy. The situation of the primary growth in the lip was rare; the disease had only spread locally; it was either an alveolar sarcoma with melanosis, or a specimen of carcinoma melanodes with much pigmented fibro-vascular stroma. Kaposi had described such tumours as commencing in buccal glands.

The following card specimens were shown:—Dr. Payne: Trichorexis Nodosa. Dr. Sherrington: Spinal Cord from a case of Friedreich's Hereditary Ataxia. Mr. Ballance: Calvaria showing perforations from a case of Hydrocephalus. Mr. Shattock: Calvaria perforated and ridged in Meningo-encephalocele. Dr. N. Moore: Case of Hydrocephalus. Dr. Handford: Aneurysm of Aorta communicating with Pulmonary Artery. Mr. Eve: Multilocular Cyst of Epididymis. Mr. E. H. Fenwick: Villous Tumour of Bladder. Mr. Churchill: Central Sequestrum of Great Trochanter from a case of Hip Disease. Mr. Targett: Traumatic Hernia through Diaphragm. Mr. Stoker: Cancer of Thyroid. Mr. J. Poland: Old Subcoracoid Dislocation of Shoulder.

CLINICAL SOCIETY OF LONDON.

Interstitial or Subpleural Laceration of the Lung.—Gummata of the Liver.—Hydatids of Liver opening into Right Lung.—Resection of Knee for old-standing Ununited Fracture of Patella.

AN ordinary meeting of this Society was held on the 30th ult., Dr. Cayley, Vice-President, in the chair.

Mr. TIMOTHY HOLMES read a case of Subpleural Laceration of the Lung in a girl aged fourteen years, who had fallen and severely bruised the right breast. There was no fracture of the ribs. The leading symptoms were hæmoptysis, great dyspnœa, and entire absence of breathing in the right lung. The right chest did not move in respiration; it was natural on percussion. These symptoms, with the history of her having a piece of biscuit in her mouth at the time of the accident, led to some suspicion of the impaction of a fragment in the right bronchus; but the progress of the case negatived this idea. The dyspnœa was at first so alarming that tracheotomy almost seemed indicated. Next day, amphoric breathing was heard under the angle of the right scapula, and this soon developed into the physical signs of a large cavity in the lung, but without any sign of fluid or air in the pleura. This cavity gradually contracted and the girl quite recovered. It is noteworthy that subcutaneous emphysema appeared at the right side of the root of the neck on the third day. When last seen, the girl, though in perfect health, had evident physical signs of considerable consolidation of the right lung. In commenting on this case, the author quoted Nélaton's description of the symptoms of subpleural laceration (including emphysema at the root of the neck) as exactly verified by the symptoms here observed. He remarked on the slight attention which was bestowed on this form of injury in most of our text-books, and the doubts which he had himself expressed in his own work as to the possibility of diagnosing the subpleural form of laceration. These considerations, together with the comparative rarity of such cases, would, he believed, justify the publication of this case; but it also contained a feature of its own, which had not hitherto been noticed in the history of the lesion—viz., the entire suspension of respiration in the injured lung. The cause of this phenomenon was discussed, and reference was made to other cases of subpleural laceration.—Mr. A. T. NORTON alluded to a similar case that occurred in a man who was by accident completely buried under a load of sand. There was gurgling and copious hæmorrhage, with pneumonic symptoms, but no pleural signs.—Mr. R. J. GODLEE referred to a specimen shown by him at the Pathological Society some years ago, in which a main bronchus had been torn completely across; could such an accident have happened in Mr. Holmes's case?—Dr. J. S. BRISTOWE suggested that there might have been a pneumothorax if there were perfect metallic tinkling and absence of breath sound.—Mr. T. HOLMES said that there was no question as to there being nothing in the pleural cavity. As the result of laceration of the lung a cavity formed gradually, and gave rise to the physical signs mentioned in the description. He believed that the laceration had involved the tissue of the lung, and not a bronchus. On recovery the lower part of the lung was solid from cicatricial processes. The subcutaneous emphysema was so limited, and only came on at the third

day, that he believed it could not be due to rupture of a large bronchial tube. The absence of breath sounds was remarkable and difficult of explanation, except on the theory that a large bronchus was obstructed by blood clots.

Dr. BRISTOWE read the notes of a case of Gummata of the Liver, in a boy aged fifteen. The patient was admitted into St. Thomas's Hospital with a tumour in the epigastrium, from symptoms of which he had suffered for six months. The tumour was about as large as a Tangerine orange, and slightly tender. The boy looked healthy; and as no history of syphilis was obtained, and no indications of congenital syphilis were observed, the suspicion that the case was one of visceral syphilis was dismissed. No definite opinion, however, was formed as to the nature of the disease; but on two occasions a fine trocar and cannula were introduced, with the result that they simply penetrated solid matter. The boy remained in the hospital for four months without specific treatment, and with gradual enlargement of the liver, and during the whole of this time presented a hectic temperature (the morning fall being down to the normal or even below it, and the evening rise varying from 101° to 103°) with frequent chills or slight rigors. But his general health remained apparently unimpaired; he did not lose either flesh or strength, he had a good appetite, and slept well. At the end of the four months, a closer inquiry elicited the facts that three of his brothers and sisters had died in infancy; that he had himself, when seven years old, suffered for several months from some affection of his eyes; and that, what had hitherto been overlooked, there were several very faint nebulæ in both corneæ. There was no trace of congenital syphilis. Acting on this information, Dr. Bristowe at once treated the patient with iodide of potassium and mercury. On the fifth day of treatment the morning and evening temperature were both subnormal for the first time; and from this time onwards (with two or three exceptions, when it rose to 98·4° or 98·6°, and one, when under the influence of an attack of tonsillitis, it rose to 102·6°) the morning and evening temperatures remained subnormal until, at the end of two months, he left the hospital. Under the anti-syphilitic treatment the liver diminished in size, all pain and tenderness ceased, and he gained flesh. Excepting for some remaining tumour of the liver, the patient left the hospital apparently well six months from the time of admission.—Dr. CAYLEY had seen a case in an adult where there was rapid enlargement of the liver in the epigastric region associated with considerable enlargement of the spleen; rigors and pyrexia led him to think of suppuration or suppurating hydatid. An incision made by Mr. Hulke detected no pus, and the man ultimately recovered.—Dr. S. P. PHILLIPS said that the intermittent pyrexia had been recognised as occurring in tertiary syphilis by Murchison in a lecture published in THE LANCET about ten years ago.—Dr. BRISTOWE, in reply, asked whether Dr. Cayley's case had been treated specifically.—Dr. CAYLEY replied that it had, but did not seem to improve as the result of it.—Dr. BRISTOWE then ventured to think that Dr. Phillips' remarks had no bearing on his case, for it was not a pyrexia like that of intermittent fever, but a genuine morning fall and evening rise such as occurred in hectic states. He had seen many cases of gummata of the liver, but none in which such a temperature chart obtained. He was aware that intermittent fever had been observed in certain cases of syphilis; indeed, he reported examples of it to the Society some years ago.

Dr. R. W. BURNET read a case of Hydatids of the Liver opening into the Lung, excavating the lower lobe of the right lung. The patient, aged thirty, was admitted into the Great Northern Central Hospital on Sept 18th, 1885, complaining of pain in the right hypochondriac and epigastric regions radiating into the right axilla and right shoulder, and of sickness and vomiting, which occurred without any special relation to the taking of food. The vomited matter was described as being greenish-yellow; she had never brought up blood, and after being sick always felt relieved. She had been losing flesh rapidly. On admission she was anæmic and weak, with an anxious expression of face; tongue red and irritable; temperature 101°; urine dark, acid, sp. gr. 1020, and containing a trace of albumen. On examining the chest, the heart's impulse, diffused and feeble, was seen and felt about or slightly outside the normal position. Cardiac dulness commenced on a level with the nipple and was lost in abdominal dulness. Dulness extended from the fourth rib downwards in front, while behind it commenced at the fifth rib and increased towards the base, where it was absolute. Breath sounds were feeble in front, somewhat harsh posteriorly, and accompanied by a few large crepitations; at the base they were feeble, and not tubular. The left side was fairly normal throughout. The lower part of the abdomen was flaccid, and not tender on pressure; but all over the right hypochondriac, epigastric, and left hypochondriac regions there was no marked tenderness. On the right side there was evident bulging. Dulness was present in the hepatic region from the level of the nipple to one inch above the umbilicus, and continued into the right axilla, epigastrium, and lower third of the left axilla. The patient had never been strong, but there was no history of definite illness until three months before admission, at which time she was slightly jaundiced, and began to suffer from pain in the abdomen, with retching and vomiting. Shortly after she came into hospital the patient was examined under chloroform, and a consultation held with a view to surgical interference, but it was deemed inexpedient to operate. On October 14th, after severe coughing, she brought up a quantity of purulent fluid, and ten days later more of the same fluid and some undoubted hydatid cysts; microscopic examination showed pus, cholesterine crystals, and hooklets. On November 23rd another very severe fit of coughing was followed by expectoration of a large quantity of cysts and pinkish purulent fluid—in all, five pints. The physical signs then considerably altered, the dulness diminished greatly in area, and feeble breath sounds were heard at the right base, but no moist sounds. The patient sank and died on Dec. 10th. At the necropsy firm adhesions united the lower two-thirds of the right lung to the parietes and to the diaphragm; the whole lower lobe of the right lung was excavated and formed a ragged cavity lined with lymph, but with no trace of true hydatid membrane; between this and the liver there was a thick layer of fibroid tissue, with an opening through the diaphragm into the liver; in the liver was a small cavity, and within the cavity a plate of partially calcareous material, bile-stained, and adherent to the wall. Dr. Burnet remarked on (1) the obscurity of symptoms when the patient came into hospital; (2) the absence of any lengthened history of previous symptoms; (3) the question, Could a diagnosis have been definitely arrived at before the appearance of the cysts? (4) what operative interference, if any, should have been adopted.—Mr. HARRISON CRIPPS raised the surgical question of the treatment of hydatid tumours of the liver. In one case he used a trocar and cannula, and then drained by means of catheters left in for months together. In another he employed a fine trocar and cannula; this case suppurated, but only aspiration was afterwards performed. The third case was operated on by incision and total removal of two large hydatid cysts through the wound. All the cases were completely successful.—Dr. F. TAYLOR understood that Dr. Burnet's paper dealt with the question of treatment of hydatid cyst presenting itself in the chest, and not in the abdomen. He narrated an interesting case where the liver was greatly enlarged, with displacement of the heart, whose apex beat was felt in the third intercostal space; considerable dulness was detected in both backs. A puncture was made at the left base and forty ounces of bile-stained fluid withdrawn; at a second puncture a similar quantity was obtained. But nothing was obtained by aspirating over the enlarged liver. A puncture of the right base yielded fifty ounces of hydatid fluid. It was not till this time that the diagnosis was confirmed. Pleurisy and exhaustion led to death. The necropsy revealed a huge cyst in the right side of the chest, and a secondary collection of fluid had displaced the heart.—Mr. R. J. GODLEE did not perceive what treatment could have been adopted before the diagnosis had been made; afterwards incision and drainage might have proved effective. He related one case in which lung and pleura had been ruptured; a large escape of bile-stained fluid followed incision, and though death occurred long afterwards, there was nothing left but a narrow fistulous track.—Dr. J. S. BRISTOWE asked whether it was a safe proceeding to open hydatid tumours by puncturing through the intercostal spaces; in one such case pleurisy developed; at the necropsy his impression was that the puncture had caused death.—Mr. T. HOLMES considered that the point in Dr. Burnet's paper was the question whether an exploratory operation to establish a diagnosis was desirable; any such operation would have been dangerous, and allowed of the establishment of the diagnosis at the risk of the patient's life. Nature had attempted to discharge the hydatids through the bronchial tubes.

Mr. J. R. LUNN showed a case of Ununited Fracture of the Patella in a man aged forty-four, in which there were four inches and a half separation of fragments, for which excision of the knee-joint was performed, with excellent result. The patient (single) was admitted into St. Marylebone Infirmary in January, 1885. The family history was good. There was no history of syphilis or gout. He scalded his face and shoulders five years ago. He had fractured his left patella sixteen years ago, and union was obtained; he again fractured the same patella six months afterwards, but it never united. He stated "his life has been simply miserable ever since on account of the gnawing pains in the left knee; and everyone used to think he was drunk, as his left knee used to give way under him, though he had worn a splint." On April 14th, 1885, Mr. Lunn excised the left knee-joint, and wired the femur and tibia together with silver wire. The operation was performed antiseptically. Six weeks after the operation the patient's limb was encased in plaster-of-Paris, and he was allowed to get about on crutches. The reason why Mr. Lunn showed this case before the Society was that excision of the knee-joint was so seldom performed after the age of forty-two. In the Méd.-Chir. Trans., vol. liii., Dr. Humphreys stated that he excised the knee-joints of forty-five patients, one being as old as forty-seven. In the same volume Mr. Grant gave an account of twenty cases, the oldest being fifty years old. Mr. Lunn's case made an uninterrupted recovery, and with no rise of temperature. The question in his own mind was whether the operation was justifiable.—Mr. T. HOLMES acquiesced in the treatment that had been adopted. Wiring the patella was, in his opinion, a rash proceeding in cases of simple fracture. As to the age at which the knee-joint might be excised, he believed it might be performed at a period of life considerably beyond forty years of age.—Mr. A. PEARCE GOULD considered that Mr. Lunn's case was a successful one. But wiring the patella left the patient with a movable joint. He had performed one such operation on a woman, and there was now a joint having good movement and a strong serviceable limb.

The following living specimens were shown:—Mr. J. R. Lunn: (1) Ulcerating Tumour of Lower Lip, in a man aged twenty-two, of sixteen months' duration; diagnosis uncertain, but father died of sarcoma (? epithelioma) of neck. (2) Frost-bite of both Ears in man. Mr. C. Ballance: Rodent Ulcer of External Ear. Dr. Savill: Ichthyosis Sebacea in a girl.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Dr. Koch's Gelatine Peptone Water Test.

A MEETING of this Society was held on April 16th, the President, Dr. Corfield, in the chair.

Professor G. BISCHOF read a paper on Dr. Koch's Gelatine Peptone Water Test, of which the following is an abstract. The author stated that he had made hundreds of tests, besides a very large number of experiments with the object of testing the method itself. He asked why should the presence of colonies be regarded as affording evidence as to the purity of water. A satisfactory answer to this could only be given in two ways. Either the colonies might behave in the same way as chemical poisons, being harmless in certain numbers and injurious or poisonous in others; or they must be held to be evidence of some other conditions which affected health. He was convinced that the former was not so, at least not within a very wide limit, say within a million colonies per cubic centimetre, which was a much larger number than any likely to occur in potable water. In proof of this he had taken a sample of New River water, which would still have been called "very good" in quality by Dr. Koch had it contained even twice the number of colonies it did contain. This he kept for six days in a sterilised flask protected against aerial infection, and then found that instead of one liquefying colony he had 640, and instead of a total of fifty-three he had 770,000 colonies per cubic centimetre. Although the sample on the sixth day compared unfavourably as regards numbers of colonies, both with New River water from the company's main to which 1 per cent. of sewage had been added, and Thames water at London-bridge, if such a number of colonies were hurtful we should have known this long since from experience, as water was frequently kept longer on board ship and under much more unfavourable conditions. The only other way of connecting the colonies with purity or quality was if they indicated something else which was injurious to health. This, in his opinion, could only be pollution. He therefore asked, Did the conditions upon which the development of colonies depends warrant any such conclusion? Temperature was perhaps the most important of those conditions, because near the freezing-point development was entirely stopped, whilst it was aided in a most marvellous way as gradually 30° to 40° C. were reached. Of scarcely less importance was the time allowed for development, or, as it would be called in the case of water, storage; next came food, and lastly aeration and light. It was evident that temperature, storage, and light had no necessary connexion with pollution. As regards aeration, it was well known that when there was a deficiency of oxygen the development of microphytes was checked. Therefore, as the deficiency of oxygen generally coincided with impurity of water, the latter would actually check, as far as aeration went, the development of microphytes. Food, the only remaining condition, was always the result of pollution; but even in distilled water, which certainly was not polluted in the common sense of the word, and where there was but a scanty trace of food, very large numbers of microphytes were sometimes developed. Referring once more to the sample of New River water kept for six days, he would ask, if in such water, containing so few organisms, and which was generally so pure, such enormous numbers of microphytes could be developed by storage pure and simple, was it justifiable to say that the number of microphytes depended upon pollution? Thus, there seemed to him an insurmountable difficulty in judging of the sanitary condition of water by the number of colonies, which might or might not be a proper standard in any given case. Nevertheless, he was convinced of the value of the method for a great many laboratory experiments, but in testing water it should be applied with discrimination, and no attempt should be made to compare totally different waters by those numbers. In concluding, the author stated it had been laid down that the presence of many different kinds of microphytes was, *cæteris paribus*, an indication of danger, but he had not seen a single report in which this suggestion had been acted on, and he therefore believed that sufficient advance had not yet been made to allow of drawing definite conclusions from this criterion. The search by the test for specific microphytes, such as were the cause of zymotic disease, did not, for two reasons, rest on a much more satisfactory basis: first, our knowledge of these microphytes was as yet very limited; and, secondly, several of those organised poisons known to us could not at all be cultivated in gelatine peptone, at least not under the ordinary conditions of the test.—In the discussion which followed, the President, Mr. Wynter Blyth, Dr. Klein, and Mr. Cassal took part.

New Inventions.

NEW PRESSURE AND TORSION FORCEPS.

THIS instrument is equally serviceable for four distinct surgical purposes. 1. It can be used as a temporary clamp to arrest hæmorrhage. 2. It forms a very efficient torsion instrument. 3. It serves for the application of a ligature to a divided vessel. 4. It can be used also as a needle-holder. and it is adapted for the introduction of every kind of

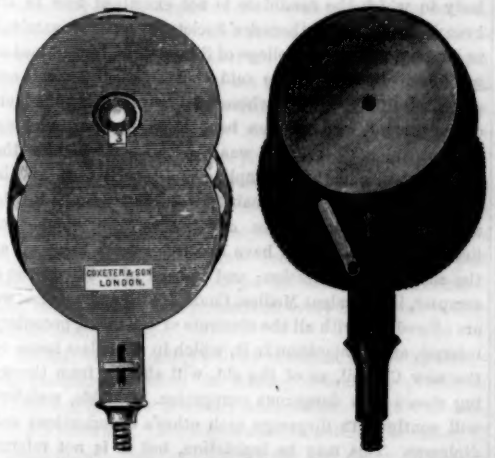
needle. The special novelty consists in the mechanical contrivance by which the opening and fixing movements are performed. The points are controlled by the rotation of an oval-shaped collar. In the long axis of this collar the blades are separated by their own recoil, but as soon as they are both turned into its narrow segment they are securely fixed and the points are placed in close contact with each other. One of the blades is loosely fixed by a ring to the

end of the collar, which thus forms the centre of rotation and imparts to the collar a sliding motion, so that the blades can be closed at any point as far down as the spring. This sliding movement of the collar greatly facilitates the manipulation of the forceps, and also gives a gradation of pressure and grip at the points. For needle-holding it will be found convenient to work the thumb lever near the shoulder; but for fixing a mass of bleeding tissue the forceps can be readily closed just above the handle. When employed as a clamp for spirting vessels during an operation, the sliding collar can be rotated with great ease and rapidity, and this device will certainly be preferred by many operators to the ordinary sliding and spring catches, and also to the serrated teeth fixed on the ring-handled forceps of Tait and Péan. The instrument is very neatly made by Messrs. Maw, Son, and Thompson.

J. WARD COUSINS, M.D. Lond., F.R.C.S.,
Senior Surgeon to the Royal Portsmouth Hospital, and to the South Hants Eye and Ear Infirmary.

A STUDENTS' OPHTHALMOSCOPE.

THE importance of the ophthalmoscope in medical as well as in ophthalmic practice renders it very essential that every student should acquire dexterity in the use of the instrument as soon as possible after he commences his hospital work, otherwise the most valuable opportunities of gaining experience are lost to him for ever. As a matter of fact, scarcely any student learns to use the ophthalmoscope efficiently until he has one of his own. Unfortunately the cost of really useful instruments prevents many students obtaining one as soon as is desirable. We are glad, therefore,



to see that Messrs. Coxeter and Son have produced a simple but excellent ophthalmoscope at a price (15*s.*) which brings it within the reach of every student. It is a refraction ophthalmoscope, with eight lenses, each ½ inch in diameter, fixed in a revolving disc. The mirror can be placed in either of two sockets, in one of which it can be tilted for the direct examination. A bi-convex lens and neat case are included in the price. On trial of the instrument, we have found it perfectly satisfactory and equal to much more costly ophthalmoscopes. It is, indeed, easier to use than many instruments on account of the large size of the back lenses.

"OSTERODE" HEALTH CLOTHING.

MESSRS. SLAZENGER AND SONS, of 56, Cannon-street, have sent us samples of their "Osterode" Health Clothing, and also of the unmanufactured article, which is wool grown in a district in the Hartz Mountains. From an examination of the above, and also from personal experience of the comfort derived from wearing the clothing, we can say that Messrs. Slazenger have introduced a highly commendable commercial article. The wool is peculiarly soft, and the woven goods are free from roughness and irritating properties; in fact, the clothing closely resembles silk in its softness, durability, and pleasant wear. We cannot, from our own knowledge, testify to the special curative and prophylactic properties of the various forms of vestment claimed for them by the manufacturers in the treatment of rheumatism, but at the same time we are justified in saying that Messrs. Slazenger's goods are well calculated to enable the wearer to avoid chills and colds, and we can conscientiously recommend its adoption both for winter and summer wear. The prices of the various articles are comparatively low.

THE FELLOWSHIP OF THE COLLEGE OF SURGEONS.

To the Editor of THE LANCET.

SIR,—As a provincial surgeon, I was pleased to learn through your columns that the Council contemplate admitting Members of fifteen years' standing to the Fellowship on passing the second examination—that in surgery, surgical pathology, and surgical anatomy. This is, I think, as it should be. It will permit many Members, whom accident and the nature of special surroundings compel to practise largely as operating surgeons, to obtain the Fellowship, and be an inducement to them to work up to the standard required by this diploma.

I should like to know when the Council intend to make the necessary alterations in their bye-laws, so that the proposal can take effect. I hope they will not wait until the new Charter has been obtained, for under the most favourable conditions a long time must elapse before that can be accomplished. I am, Sir, yours &c.,

May 3rd, 1886. M.R.C.S.

STUDENTS AND THE MEDICAL BILL.

To the Editor of THE LANCET.

SIR,—The imminent probability that the Medical Bill now before the House of Commons, and which has already been read a second time, will ere long become law, renders it particularly desirable that an early attempt should be made to secure such amendments of its clauses as are necessary in the interest of all classes of the profession. A uniform standard of minimum qualification, and the adoption of a descriptive title by which every registered medical practitioner shall be designated, are the points which are especially important from the student's point of view. They were urged by a deputation of metropolitan students of medicine before Mr. Mundella when the ill-fated predecessor of the present Bill was in process of abortion, and the success then achieved encourages the hope that a similar deputation to Sir Lyon Playfair at this crisis may result equally satisfactorily. May I ask your powerful aid in this matter, and suggest that a meeting of students be held at each hospital in London, when one or two delegates should be appointed to represent the majority on the proposed deputation, and it might be desirable to hold as well a general meeting of students and others at some centrally situated spot. If done at all, this thing must be done quickly, and I shall be glad to receive communications on the subject from gentlemen willing to organise the necessary gatherings at the various hospitals.

I am, Sir, yours truly,

CHAS. H. WADE, B.A.Oxon., M.R.C.S., &c.
Beauclerc House, Upper Norwood, May 5th.

*** The interest of students in an amendment of our medical examining system is obvious, but it is little considered. Corporations lay heavy burdens upon them of money and of examination, and pay little heed to the simplification and the absolute fairness of the ordeals by which they are to be tried. They have a somewhat despairing feeling of helplessness, but they have a right to ask a minister who claims to be protecting the public from unqualified practitioners to protect them from unreasonable exactions on the part of the examining bodies, and, when they have gained professional titles, to have them duly respected.—ED. L.

THE LANCET.

LONDON: SATURDAY, MAY 8, 1886.

THE subjection of the Medical Profession to the Privy Council proceeds with little protest but our own. As we have already said, it seems not impossible, if the present Parliament does not come to a premature dissolution, that Sir LYON PLAYFAIR may carry his Medical Bill. It was read a second time on Monday night, and the Committee fixed for Monday, the 17th inst. In medical politics Sir LYON PLAYFAIR has always been an *opportunist*. When it might have been in his easy power, fifteen years ago, to obtain direct representation for the profession, he did not move a finger to get it inserted in a Bill which would have given far better Conjoint Boards than this, and which would actually have removed the scandal of so many examining bodies, so likely to survive under this Bill. He has left others to fight the battle of direct representation, and now, when it is fought and won, and the principle everywhere conceded, he, with all the powers of a Vice-President of the Council, brings in a Bill to add four direct representatives: TWO to represent, as Dr. FOSTER said, 16,978 practitioners in England, *one* to represent 2372 practitioners in Scotland, and ONE to represent 2500 practitioners in Ireland. The other elements of the Council are to be unchanged. What justice is there in such a proposal as this? What fairness to the practitioners of England in their numerical proportion of seven to one in the other divisions of the kingdom? Still more, what is the good of such an arrangement? What could four direct representatives do against twenty-four representatives of universities and corporations which not only have pecuniary interests, but which interests the profession knows have been constantly uppermost in the consideration of their representatives in the Medical Council, and which the present Bill does not dare to interfere with, whatever justice to the profession or to medical students with the ordeal of ever-accumulating and more exacting examinations may demand? But we are told by Sir LYON PLAYFAIR that this Bill secures certain great improvements — especially *two*. It provides that every person entering the profession shall be examined in each branch of practice — *Medicine*, *Surgery*, and *Midwifery*; and, secondly, that if the examining bodies fall short of a good standard, as even certain Royal Colleges are said to have done, under the demoralising conditions of rivalry and competition, which will be largely perpetuated under this Bill, the Medical Council may, *with the concurrence of the Privy Council*, disqualify that unworthy body. May! Sir LYON PLAYFAIR knows well that such a power has resided in the Medical Council ever since it was a Council. He knows well, too, that the Council has never either dared or cared to exercise it, though some of the different bodies of which the Council consist have and still continue to hold the most contemptuous views of each other's examinations. This mutual disrespect of bodies that still stand well in their own eyes is a most painful fact to all acquainted with the state of matters, and is doing much harm. A remedy should be found for it in a well-constructed Medical Council, with perfect independence, and with duties of supervision not only over diploma-granting bodies, but over universities which grant degrees, so that the character of medical graduation be duly maintained. Instead of that, in this Bill universities are only regarded as corporations, and their standards will not be criticised further than to see they come up to the mark of securing bare competence. Let the House of Commons, then, not be misled by Sir LYON PLAYFAIR'S rosy accounts of the absence of opposition to his measure on the part of the examining bodies. Their silence is his condemnation. They do not oppose the Bill because it does not reform them. It practically leaves them alone, and leaves them in full possession of their representation in the Medical Council; and, for aught we know, will leave them to compete with each other and to despise each other, as at present, to the great injury of the profession and of that good and respectful feeling which ought to obtain between analogous bodies in different divisions of the kingdom.

But we shall be told that the Bill secures examination in all branches of the profession—medicine, surgery, and midwifery: as if this were a great boon to be thankful for. This is secured already. There is scarcely one examining body in which the candidate is not examined now in all branches. At the Apothecaries' Society, even, he is examined in surgery, and at the College of Surgeons he is examined in medicine. But it will be said that a full diploma is not given. Quite true, But whose fault is this? Not the fault of the student, who has been bandied about from one body to another; not because it was necessary, but because the bodies existing in the incomplete one-faculty form and in great numbers had to be maintained. Instead of a Bill to abolish superfluous bodies and reduce the number of licensing authorities, we have one to preserve them all, at the cost of the profession; and instead of a Bill giving a compact, independent Medical Council with full powers, we are offered one with all the elements of weakness, pecuniary interest, and competition in it, which in the glass house of the new Council, as of the old, will abstain from throwing stones as a dangerous occupation. Outside, members will continue to disparage each other's examinations and diplomas. This may be legislation, but it is not reform, and it excites in us neither admiration nor gratitude. To crown all, the new Medical Council is scarcely to take a step without the consent of the Privy Council, which is mentioned between forty and fifty times in this Bill. We must still hope that some adequate and effective criticism will be applied to it by some independent and intelligent member of the profession in the House.

DR. MAUDSLEY contributes to the current number of the *Fortnightly Review* an interesting paper on "Heredity in Health and Disease," wherein he sets out in an orderly and intelligible shape the laws which govern the inheritance and transmission of disease, so far as these are ascertained. It is needless to say that this is admirably done, and that the reader will find light and leading in the perusal. Meanwhile Dr. MAUDSLEY would seem to write with the feeling that what he has to say is new; whereas,

though not perhaps as widely known as they ought to be, the principles of heredity, so far as they are expounded in this article, have certainly been before the profession and the public for some years at least. Even in respect to the utilisation of disease-tendencies and disease-immunities in the rectification of faults and liabilities of the organism Dr. MAUDSLEY has been anticipated. This is how he states the case: "Here, then, we perceive the opening of a most interesting and fruitful line of medical inquiry, not yet ever seriously attempted, namely, the production and the elimination of constitutional disease-tendencies and disease-immunities in the offspring by the combinations of different parental disease-tendencies and immunities. And not of disease-tendencies only of the same kind as the parent has. If a child have a disease unlike that which either parent had, it may nevertheless owe it to them; for there is abundant reason to believe that variations may occur in morbid heredity, just as they do physiologically." Dr. MAUDSLEY must be well aware that "the eradication of disease" by developmental processes has been repeatedly discussed and enforced by medical writers. Thus it has been suggested to meet the tendency to tubercular disease by the calling out of energies incompatible with the consumptive habit, and to seek the repression of undesirable characteristics whether of body or "mind"—to use the conventional phrase—by the development of other characteristics, trained, so to say, across them. And it has been again and again contended that the individual must be studied, if any good is to be done, in the light of the ancestral inheritance. And that the well-known rules which govern the improvement of stock by "cross-breeding" and the introduction of new "strains" should be, as far as practicable, applied to the improvement of the race and breed of man. There is nothing new in the suggestion. This much it is necessary to say on the point of originality in respect of the views set forth in this paper before. They have been for many years past before the profession and the public, and they are illustrated and enforced by the experience of every intelligent practitioner in the country.

Dr. MAUDSLEY'S essay will do excellent service by bringing prominently before the reading community principles which ought to be generally understood. As it was contended years ago, "Nothing is done to cut off the entail of consumption, gout, hereditary brain and nerve disease, or a score of other transmitted constitutional affections. Excepting vaccination as preventive of small-pox, we have no systematic plan of treatment for the elimination of those congenital tendencies and potentialities from which spring some of the most formidable diseases. The omission is, however, one of grievous consequence to youth. When the young man or the young woman comes to face the toil and risks of life, the strength of body and mind is found to be impaired, and existence itself handicapped by the burden of entailed constitutional weakness and disease. To cut off the entail completely, it would be necessary that at least two or more lives should be placed under discipline. Parents and children must both avoid modes of life and practices calculated to increase the mischief, and further prejudice the estate. The sins of the fathers are visited upon their children, even to the third and fourth generation. Many a youth falls a victim to consumption or brain disease because his father or grandfather elected to gratify his coarse animal appetites and lead a vicious and dissipated life. When the inheritor of organic peculiarities, thus acquired and transmitted, himself adds recklessness to danger, the result can scarcely fail to be signal disaster. What are called 'morbid germs' would probably be more accurately described as abnormal developments or states of the system, which render the phenomena of disease likely to occur. When these states begin in disorder of function, the irregularity speedily reacts on the organism, and, in obedience to the law of natural development, produces a change of structure corresponding to the disease. In the course of two or three generations a morbid peculiarity of the physical system—whatever it may be,—which at first was an effect, begins to operate as a cause, and thus the disease by which the change was wrought in the system is rendered *hereditary*, being reproduced by the special morbid type of development to which it gave rise. Thus is how it comes to pass that certain families are distinguished by what is known as a 'consumptive physique," while others are 'asthmatical,' 'gouty,' and the like. It is not sufficient, nor is it wise, to wait until the children of gouty, rheumatic, asthmatic, or bronchitic parents, and those labouring under other known diseases, exhibit the formulated symptoms of a constitutional taint. Before this point is reached the young organism will have suffered serious injury by the occult workings of the malady. Preventive medicine should recognise the evil and grapple with it while it is still burrowing in the dark. Specific diseases known to exist in a family should be treated in every member without waiting for indications. The maxim 'Let sleeping dogs lie' is often of value in dealing with adults, but it is inapplicable in the case of children; because in the child-state, and while the organism is still in process of development, the constructive forces can be enlisted in the work of cure."

This is the practical moral, as regards the individual, of the story Dr. MAUDSLEY has to tell, though it was pointed and printed years ago. The moral as regards the race is that parents should be so selected and combined that their offspring may be healthy, the resultant of the two paternal forces, which will of course differ from both in *plus* and *minor* characteristics and qualities, being something foreseen by science and intentionally developed. Dr. MAUDSLEY recognises and gives expression to this idea, and yet he has not, apparently, so much faith in the application of the principle he expounds as the doctrine he preaches certainly justifies and would seem calculated to inspire. He says: "It is not possible to predict what will be the exact mental qualities and bodily features of the child of two persons whose characters we know very well, nor so much as to tell what its sex will be." It would have been better to say—The present state of knowledge does not enable us to make these vaticinations with certainty; because it is obviously only the defect in our comprehension of facts which renders the foresight required so difficult as to be unattainable. There can be no actual obstacle in the way of foretelling both sex and character, physical and mental. Dr. MAUDSLEY vies with Professor HUXLEY in his admiration of DESCARTES, and, like the Professor, hails him as the originator and father of modern philosophy. No one will dispute the position thus taken

up, though there may be some who would qualify the praise lavished on DESCARTES by both HUXLEY and MAUDSLEY. We commend the paper on "Heredity in Health and Disease" to the attention of our readers for its perspicuity and practical value as a contribution to the recent literature of a subject which is inadequately understood by the outside public. We cannot, however, concede to Dr. MAUDSLEY a claim to originality.

THE short-sightedness of the enemies of vaccination is shown in nothing more than in their opposition to compulsory public vaccination. The very fact that the State compels vaccination ensures in the long-run the safety of vaccination. The State feels its responsibility for having the work done well, and very effectually impresses this wholesome feeling on all its agents in the performance of the operation. Those who do well are rewarded, and those who do not do well suffer loss. We record almost weekly the award of grants to public vaccinators for their work—that is to say, a certain extra payment, over and above the ordinary vaccination fee, for each case realising certain tests of good vaccination, such as the production of four separate good-sized vesicles which shall leave marked foveation or pitting, thus defined: a *first grade*, with scars having collectively at least half a square inch total area; or a *second grade* (admitted only in cases of a first award), with scars less than the above, but having collectively at least one-third of a square inch total area. The report of individual awards gives little idea of the extent of good public vaccination. Rather must this be gathered from the Annual Report of the Local Government Board. The fourteenth Annual Report is before us—that for 1884–5; and from this we learn that about two-thirds of the public vaccinators vaccinate so as to get awards. Thus the medical staff of the Board visited 245 unions containing 1096 vaccination districts. To the vaccinators in 729 of these districts special awards were made by the Board on the reports of inspectors as to the quality of vaccinations performed. Unfortunately there is no such public record or report of the excellence of the vaccination performed by private practitioners, much of which would bear a favourable comparison with that done by public vaccinators. There is another illustration in this Report of the way in which a system of public vaccination promotes care and purity of vaccination. A great supply of vaccine lymph is maintained by it, enabling the Local Government Board to give lymph to practitioners who apply for it to start a local series of vaccinations. Practitioners can be now supplied either with human lymph or with calf lymph. But the point we are concerned with just now is this, that all lymph so supplied by its officers to the Local Government Board is carefully examined, and that such is the pains taken to secure satisfactory lymph, and such the success, that of 11,447 applications dealt with during the year, no suggestion of resulting syphilitic disease was heard of in any one case, and the Board was able to speak with thorough confidence of the purity and efficiency of the lymph.

We rejoice to see, in the main proof of the continued public confidence in this greatest of all devices for averting death and disease. In St. Pancras a remarkable vaccination census was taken, which showed that of 25,917 persons over one and under ten years of age, no less than 25,692 or more than 99 per cent., had been vaccinated; while of 112,425 persons over ten years of age, 71,213, or 63 per cent., had been vaccinated once; 39,835, or 35½ per cent., more than once; and only 1377, or less than 1¼ per cent., were unvaccinated. Those who have discovered the beauty of small-pox and the horror of vaccination may well be staggered at the persistence of the "great delusion," but men of common sense will see in facts like those of St. Pancras and other populous unions, such as those containing Birmingham, Leeds, Blackburn, &c., where the unvaccinated only reach 1·4 per cent., an ample justification of the Vaccination Acts, and satisfactory evidence that on the whole they are appreciated by the people.

THE growth of Provident Societies, more especially amongst the industrial classes, is regarded, and very justly so, by men of all shades of opinions as one of the most hopeful features of modern social progress. If the system of assurance against sickness and death could be made universal, workhouses would disappear, the pressure on hospitals be vastly relieved, and private charity might to a great extent be dispensed with. Parliament has recognised, though somewhat tardily, the national importance of the provident movement, and for its stability special statutes have been enacted. It therefore becomes a matter of general concern to be informed by an officially appointed actuary of high repute that his valuation of the assets and liabilities of a provident institution has resulted in establishing a deficiency of £115,994. Such is the pith of a published report, dated 21st January last, by Mr. HOWARD S. SMITH, actuary, at Birmingham, on the Cannon-street Male Adult Provident Institution in that town. The deficit is happily not an actual one in cash, as the audited balance-sheet for 1885 proves a total in hand and in first-class securities of £83,185 1*s.* 2½*d.* No less satisfactory is it to note that no question of malversation is raised. Everything is in order, and the management is stated to have been unimpeachable; but the nominally *provident* institution appears to be travelling on *improvident* lines in paying out more than it is justified in doing according to the scale of contributions. Generosity seems to have once more outstripped prudence.

The objects of the Society are twofold: the relief of members in case of sickness or any other infirmity such as would render them incapable of working for their support, and to render assistance on the death of a member or his wife. Last year the Society had 9598 members. The payments for sick relief reached £12,613 10*s.* 5*d.*, for medical attendance and medicines £1375 11*s.* 9*d.*, and for members' and wives' funerals no less than £3213. The medical staff includes twenty-six legally qualified practitioners, and, additionally, seven consultants to whom the Society pays regular fees, when on duly certified urgency a consultation is deemed necessary. When it is added that the annual income of the institution is £16,600, and that within the last ten years the members have received, exclusive of medical attendance, £123,444 8*s.* 10*d.*, nothing more need be said to prove that the adverse actuarial reports are matters of weighty general interest. Mr. HOWARD S. SMITH, whom we have already quoted, regrets that his report must be unfavourable, and his eminent predecessors said substan-

tially the same. In 1871 Mr. F. G. P. NEISON (an investigator and writer of great reputation on friendly societies' statistics) reported that for the provident institution under consideration to be in a sound financial condition, its accumulated funds should be increased by at least £21,244 1s. 11d. This deficiency had risen to no less than £96,679 at the end of 1879, when the state of affairs was investigated (pursuant to 38 and 39 Vic., cap. 60, sec. 14) by Mr. A. J. FINLAISON, the actuary to the National Debt Commissioners, who very plainly set forth "the gravity of the position of affairs." All the actuaries have agreed that the chief cause which is weighing down the financial balance with such increasing weight is the liability at death without adequate provision. As a sick society we conceive this provident institution might be practically solvent, according to the members' present payments; but as a sick and life insurance society the present financial disequilibrium, which is remediable, may prove disastrous insolvency. But a very small increase in the payment of each member, not more than twopence or threepence weekly, might stem the downward current, and in a few years restore stable prosperity The whole question is to be considered at a special general meeting of the members of the Society to be held in the Birmingham Town Hall on the 27th inst., at 8 P.M. Conceding to the fullest that in such a mutual society every member has a right to vote on the ultimate disposal of the common property, thousands of men in public meeting assembled are not the most competent court of appeal from a decision pronounced independently by such actuaries as Mr. HOWARD SMITH, Mr. NEISON, and Mr. FINLAISON. It may be difficult to convince many of the 9600 members that a society with £83,000 may be insolvent; but a little reflection will satisfy anyone that a provident institution with £1000 may be rich, and one with a thousand times that amount hopelessly bankrupt: it is a question of the proportion of liabilities to assets. The members of the Cannon-street institution are all growing older—drawing nearer to times of sickness and to the certainty of death; their ranks are being steadily increased, and yet their capital is shrinking, whereas it should be rapidly accumulating to meet inevitable future demands. One fact not to be overlooked is that the experience of sickness of the members has exceeded the computation, and the medical officers may assist materially in checking this source of loss by limiting sickness allowance to proved inability to work. Malingerers are difficult to detect; and in times of bad trade like the present many men lack the best stimulus to shake off slight ailments. But, with every economy, the deficit must grow, unless the substantially unanimous advice of the actuaries be acted on.

Suggestions have been thrown out to reduce the expenses of management, and to alter the system of administering medical relief by appointing two or three surgeons exclusively to attend to the members. Such proposals in the pending crisis recall ABRAHAM LINCOLN'S famous warning against the imprudence of "swopping horses while crossing a stream." No one has impugned the ability or the integrity of the Society's management, and every member living within a radius of three miles has a choice of any one of the twenty-six members of the regular medical staff. It is not questioned that these gentlemen have long enjoyed the public confidence, and that they discharge their duties with ability and conscientiousness. It would be a mistake to divert attention into a side issue, when it should be riveted on the great fact which the actuaries have established, and on the remedies which in principle they have advised. If the present benefits are to be maintained, the members' contributions must be increased; if these are to stand as at present, payments at death must be abolished, and sick pay may have to be reduced. The Society has been in existence forty-five years, it has done an incalculable amount of good, and may have before it a long life of increased and honourable usefulness, if only the great principle of thrift be practised—to make present sacrifice for future good.

AMONG the agenda for the consideration of the members of Convocation at their annual meeting on the 11th inst. the proposals for reforming the constitution of the University of London occupy a prominent place. The Special Committee nominated by Mr. MAGNUS in December last has apparently matured a scheme, which Convocation will be formally asked to receive. The scheme, however, has not yet been printed and circulated, so that its consideration will probably be postponed until the end of next month, when a special meeting must be summoned. The points of resemblance and difference between it and Lord Justice FRY'S scheme will be keenly scrutinised, and we shall be much surprised if there be found sufficient improvements therein to justify the obstruction and the delay in pushing the reforms forward. Meanwhile Mr. TYLER and Mr. SPRATLING are anxious that Convocation should settle the matter offhand, and hence they will move resolutions of their own. Mr. TYLER'S proposals are: an increase in the number of senators nominated by Convocation, and the limitation of their tenure of office to a term of years; the formation of a Congregation, composed of the Senate, certain members of Convocation, examiners, and representatives of affiliated institutions, to advise the Senate on the examination regulations; an increase in the powers of Convocation; and the establishment of University lectureships. Mr. SPRATLING'S proposal goes much further in the direction of bringing the Colleges into closer connexion with the University and of giving some direct influence to their representatives, and in this respect approaches much more nearly to Lord Justice FRY'S plan of reform. But all these suggestions must have been before Mr. MAGNUS and his committee, and will doubtless be dealt with in his report, so that Convocation will probably refer these resolutions also to a special meeting. The position of reform is greatly altered by the recent additions to the Senate, for Mr. HENRY MATTHEWS, Q.C., and Dr. PYE-SMITH, were active members of Lord Justice FRY'S Committee, and are bound to urge the speedy consideration of the question. But what is the Executive Committee of the Association for Promoting a Teaching University doing? An exceedingly able letter has been drafted and sent to the various teaching institutions in London of university rank, to the medical schools, to the Senate of the University of London, and to the professional corporations, but, so far as we can gather, no action has resulted therefrom except in the University itself. Sir EDWARD FRY has shown his continued interest in the movement by moving for a Committee of the Senate

to consider and report on the letter, and, if necessary, to confer with the Executive Committee. It will be indirectly, by favouring internal reform in the University of London, and by compelling the London Colleges of Physicians and Surgeons to follow in the line of the opinions of those advocating the establishment of a Teaching University, or in being joined thereto, and so increasing the literary and scientific elements in their examinations before they can be granted the power of giving degrees, that this Association will justify its existence, rather than by any direct action of its own.

Annotations.

"Ne quid nimis."

UNCERTIFED CAUSES OF DEATH IN LARGE ENGLISH TOWNS.

THE Registrar-General reports in his Annual Summary for 1885 that the causes of more than 4000 deaths registered during that year in twenty-eight of the largest English towns were not certified, signifying that in this large number of cases no legal certificate of the cause of death under the hand of a registered medical practitioner or of a coroner was produced to the civil registrar at the time of the registration of the death. It further appears that these deaths were in the proportion of 2·3 per cent. of the total deaths registered in those towns during the year. This proportion was slightly below the proportions that prevailed in the preceding three years, when they were 2·5, 2·6, and 2·4 per cent. respectively. It may readily be imagined that in a certain proportion of deaths, more especially of those of infants and old people, there may not be such medical attendance during the last illness of the deceased person as the Registration Act contemplated when it fixed the obligation of furnishing certificates of the cause of death upon medical practitioners. There seems no good reason, however, why this proportion of what may be called necessarily uncertified deaths should vary very widely in different towns, although the proportion may be to some extent dependent upon the social condition of their populations—that is, upon the relative amount of the poorer classes. The varying proportions of uncertified deaths in the twenty-eight large English towns cannot therefore be referred to this cause. It appears that during 1885 the proportion of uncertified deaths was equal to 1·1 per cent. in London, against 1·2 and 1·3 per cent. in the preceding two years. In the twenty-seven provincial towns the percentage of uncertified deaths averaged 3·2, or nearly three times that in London, and ranged from 0·6 in Plymouth, 1·2 in Brighton, and 1·3 in Portsmouth, to 4·8 in Liverpool, 5·6 in Hull, 6·1 in Sheffield, 7·0 in Halifax, and 7·5 in Oldham. With reference to the five last-mentioned towns, it may be noted that they also showed a large excess of uncertified deaths in each of the four years 1882, '83, '84, '85; and that the proportion of uncertified deaths has been remarkably stationary in Liverpool and Hull, while it has shown a constant tendency to increase in Sheffield and Oldham. It may be pointed out that the numbers of uncertified deaths and of inquests are almost invariably in inverse proportion to each other. The proportion of inquests to total deaths in the twenty-eight large English towns during last year averaged 6·4 per cent., scarcely differing from the proportions in recent years; the proportion, however, in each of the five towns above mentioned, with the largest excess of uncertified deaths, was very considerably below the average. The highest proportion of inquest cases in these five towns was 4·8 in Liverpool, whereas Halifax and Oldham, which had the largest proportions of uncertified deaths, showed the absolutely lowest proportions of inquest cases—only 2·9 and 2·7 per cent. respectively. It cannot be doubted that the high proportions of uncertified deaths in these five towns afford a tolerably accurate gauge of the amount of unqualified medical practice prevailing therein; and it is only necessary to refer to the reports of proceedings in police and coroners' courts to prove how much of this unqualified practice simply means imposition on the ignorance and carelessness of the poor. In the present condition of the law respecting uncertified causes of death, the co-operation of the coroners of our large towns appears indispensable to protect the poor from this dangerous form of imposition.

CHOLERA INTELLIGENCE.

So far as Europe is concerned, definite news as to cholera is still confined to Brindisi and the Adriatic coast. But unfortunately the disease is extending, and this under circumstances that must cause the greatest anxiety. Thus, the city of Venice is infected, and its sanitary circumstances are not such as to give hope that at this season of the year the disease will be merely of a sporadic type. On May 5th ten cases and three deaths took place there, and there can be but little doubt that these are not the first attacks. Then, again, the disease has extended inland as far as Vicenza, an important town lying on the line of railway between Venice and Verona, and rather more than midway between the two places. Nine cases were reported there on May 4th, and two more on the 5th. The first rumour of cholera in Venetia, during the present European epidemic, dates as far back as September, 1884, when two deaths occurred there. Off and on, rumours of isolated attacks have been renewed, and since the commencement of the year the disease has been scattered about the coast line as well as inland. Under these circumstances, the sudden announcement of so many cases in the province, together with the extension into a neighbouring province at the commencement of the hot weather, bode ill for North-eastern Italy. Several cases still occur daily at Brindisi, with occasional deaths; but in that port the disease is said to be abating, and to be losing its more distinctive characters. A private letter published in Vienna further states that the disease has been imported into Salonica by Italian sailors, and that there are cases in the hospitals there.

"EXHIBITIONS."

WE hail the opening of another "Exhibition" in London on grounds of public health and happiness. This huge melancholy city has positively no open-air amusement for the public except such as these exhibitions afford. The "gardens" which supplied our fathers and grandfathers with places of resort, where it was possible to spend some portion, at least, of a fine evening out-doors without being wholly deprived of the means of entertainment, have been improved off the face of the earth. It is therefore most satisfactory to find that, by fortuitous circumstances no doubt, the progress of enlightenment and enterprise has provided us with a substitute. It is devoutly to be hoped that those who have shown so much good-will to the public in organising the summer exhibitions of the last few years will not grow weary of their kindly service, and that the public will, by their patronage of the entertainments provided for them, justify, and in some part requite, the effort made to serve them. We have long felt, looking at the matter from a health point of view, that something ought to be done to supply London with the means of out-door amusement available for the summer evenings, and for the classes whose only time of leisure occurs after the

business hours of the day are over, as well as for those who can resort to such pleasurable scenes by day. Certainly no more admirable attraction or means of entertainment could well be devised than that afforded by the Exhibition which Her Majesty graciously opened on the 4th inst., and which the public owe mainly, if not solely, to the good taste and loyal enterprise of the Prince of Wales. The community will not be slow to appreciate His Royal Highness's most excellent help in this matter. Edinburgh and Liverpool are similarly favoured with exhibitions, and we doubt not that their appreciation of the value of the boons conferred on them will equal our own. There is a black lining to every silvery cloud, and it is to be regretted that the managers of theatres and some tradesmen are not as much advantaged by exhibitions as the general public. Perhaps when once the habit of seeking amusement away from home in the summer evenings is gradually formed by the pleasant education we are undergoing, those whose business it is to provide the public generally with entertainment may find their coffers more quickly recouped. Trade must beget trade, so that in the long run the shopkeeper cannot possibly lose.

BERI-BERI.

AN industrious investigation of some of the circulatory conditions that obtain in the Japanese "kakké" or beri-beri has been undertaken by Dr. Wallace Taylor, with the production of some valuable results. In none of the cases was there organic disease of the heart or arteries, and no functional derangement other than that attributed to the influence of the "kakké." Sphygmographic tracings revealed a very sudden and high upstroke, with precipitous descent from the apex of the percussion wave and marked dicrotism. The first deviation of the circulatory system in kakké from the normal is one of cardiac excitement. There is also diminished tension, due to loss of arterial tone. The chief causes of danger in the acute disease are found in the impaired condition of the heart and enfeebled circulation. The extent, however, to which the heart and vaso-motor system are affected in the disease is liable to relatively large changes. Dr. Taylor considers that all the conditions of the heart and arteries can be explained by the action of the *materies morbi* of kakké upon certain portions of the cerebro-spinal nerves and sympathetic system. Age exercises considerable influence over the occurrence of the disease, which is most common between sixteen and twenty-eight years of age. One attack of kakké appears to render the patient more liable to subsequent affection. Women are much less likely to be affected than men. Though the female sex in general enjoy a marked immunity, yet in the puerperal state they are very liable to take the disease. It is but seldom that traces of albumen are found in the urine. Partial paralysis of the muscular walls of the bladder is occasionally to be met with. No mention is made of the multiple neuritis, of which so much has lately been written in England.

A CHEMICAL ANALYSIS DESIRABLE.

A LITTLE more than a week since an inquest was held at Sutherland respecting the death of a boy aged six years, who retired to rest one evening complaining of toothache. In the night he vomited, and the next morning he died apparently exhausted. The post-mortem examination revealed some red patches in the stomach, but no other diseased condition that would point to the primary cause of death. We regret that an analysis was not ordered by the coroner; but the jury expressed themselves satisfied "that deceased had died from the effects of excessive vomiting, but what caused this there was not sufficient evidence to show." Exactly; that is just why we contend a further examination should have been made by a skilled analyst.

LIVERPOOL MORTALITY IN RELATION TO WORKS OF SEWERAGE.

IT is now over fifteen years since Dr. Burdon Sanderson and the late Dr. Parkes, at the instance of the Corporation of Liverpool, made a report on several of the more important matters affecting the health of the city. One of the recommendations they submitted aimed at the removal of injurious conditions of sewerage, including especially the provision of adequate sewer ventilation. On receipt of this report the Corporation undertook an exhaustive inquiry into the state of the city sewers, and the late engineer commenced by freeing them from deposit and by providing ventilating manholes or shafts at a distance of not less than 100 yards apart. Mr. Clement Dunscombe, the present city engineer, has followed out the work of improvement, and he now submits a report which shows how large an amount of valuable work has followed on the joint report of fifteen years ago. Gradually the system of sewer ventilation has been perfected, and whereas prior to 1871 there were only "Archimidean" screw ventilators connected with branch sewers in courts, &c., ventilating openings of not less than sixty-three inches in superficial area have now been fixed at a distance of about eighty yards apart along the lines of sewers; this work having been completed in 1882. Indeed, in 1882 as many as 177 miles of sewers had been ventilated, and between 1876 and 1885 as many as 72 miles of new sewers had replaced such as were, by reason of their favouring deposit or otherwise, faulty in point of construction. The passage of road detritus into the sewers by the road gullies was also found to have largely worn the inverts of the sewers, and many of these have now been re-inverted with Portland cement concrete, others being altogether replaced by the best blue bricks, moulded to the respective radii. So, also, the gullies themselves have been so reconstructed that detritus can easily be removed from them before it has a chance of passing into the sewers. Attention has, however, been by no means limited to the public sewers, for bye-laws, which have been confirmed by the Local Government Board, are now in force in connexion with the construction of house drains, and, as Mr. Dunscombe very truly points out, it is found that the highest standard of house drainage is extremely simple and can be carried out at a moderate cost. Bye-laws regulating this subject are, as a rule, of but imperfect service, unless steps are taken to secure their proper administration; and here Liverpool has acted wisely by appointing an inspector for each of the districts into which the city is divided for this purpose, and it is the duty of these inspectors to see that the work is in each case executed in accordance with the regulations and the plans which have been approved in the engineer's department. For all the valuable and necessarily costly work, some result should properly be forthcoming. The work is only just completed, and hence its effects may be expected to show themselves in a more striking manner in the future than at present; but still, it is interesting to note the death-rate of the city during the several periods antecedently and subsequently to the execution of these works. For the ten years 1861-70 the death-rate per 1000 living in Liverpool was no less than 32·5. Between 1871 and 1880, the mean rate had fallen to 28·4, and since then a steady uninterrupted fall has been maintained, until in 1885 we find it standing at 23·7. Mr. Dunscombe would, we feel sure, be the first to admit that many influences, other than improvements in sewerage, have been at work in producing this great saving of life; but whilst this must necessarily be so, we would unhesitatingly assert that, had the state of the sewers remained to this day the same as it was at the date of the Sanderson and Parkes report, much of the substantial reduction in the death-rate which has

taken place would never have been secured. The experience of Liverpool in this respect should act as an incentive to sanitary authorities in all parts of the kingdom.

THE PRODUCTION OF MALARIA.

THE connexion between forced vegetable decomposition, insufficient drainage, and the rapid rise and fall of streams on the one hand and malaria on the other, has long been recognised, as also has the influence of season in the production of the disease. The matter has received considerable attention in various parts of the United States, where malarial disease constitutes a constant source of danger to health in special localities; and in the ninth report of the Board of Health of New Jersey certain local causes of the prevailing evil are discussed. Thus, the influence of mill-dams is alluded to. At Bound Brook at one time the entire population was prostrated by the various forms of malarial fever. Every year witnessed many cases of the disease, sudden "wilting" of swamp vegetation and sudden changes in the atmosphere and rainfall materially influencing it. A local dam was removed and the swamp was drained, the result being that malarial disease, with its chills and fever, has almost entirely disappeared. In other places, until recently remarkable for healthiness of site, the diversion of streams for artificial ice-ponds and other purposes has added to the pollution of vegetable decay, dams have been constructed for similar purposes, and, as a result, obscure forms of malaria are becoming fairly settled in the localities. In much the same way the influence of decomposing sawdust is regarded as causing malaria. The material, in its putrefactive processes, very much resembles other vegetable matters, and the experience of the Ontario Board of Health is quoted as showing how deposits of sawdust along the shores of streams, and especially on those of bays and ponds, in undergoing decomposition, have led to injurious results, including the production of malarial diseases. Dr. Hargis, who is well known in connexion with his careful observations on yellow fever and other subjects, has stated that on the west coast of Florida, where malaria is seldom found, it has always, when it has appeared, had a saw-mill as its centre. The conclusion come to is that the decay of vegetable fibre is connected etiologically with malaria, and that inspection of streams is necessary to its prevention. In much the same way, it is also regarded that injury to health is likely to ensue if ice-ponds are constructed in marshy spots, the ice itself tending to be unwholesome if cut from stagnant, shallow pools. Indeed, legislation has in some places stepped in to prevent the sale of such ice.

ONE IN A THOUSAND.

A SPARE man, just touching the middle height, with finely-cut patrician face and complexion of old ivory lighted up with a grave smile, or darkened again with sad, pensive eyes—such was Agostino Bertani, head of Garibaldi's medical staff, surgeon-in-chief to the General's "Mille" and in every sense, one in a thousand! Carlyle has said that Mazzini sacrificed to the revolution one of the finest literary faculties of the century: replace "literary" by "surgical" and the same might be said—with at least no Italian dissentient—of Bertani. A distinguished student and graduate of the Medical School of Pavia, he had barely entered on the career for which nature and culture had destined him when he was drawn by an irresistible force into the tremendous conspiracy which started in 1830, exploded in '48, "causing the thrones of monarchs to quake and the horns of the altar themselves to tremble." In 1854 we find him, in the intervals of professional work, conspiring with Antonio Panizzi, of the British Museum, to aid Garibaldi in releasing the noble prisoners of San Stefano; in 1859, on the outbreak of the war that drove Austria out of Milan, organising and superintending the ambulance of Garibaldi's "Cacciatori delle Alpi"; in 1860 completing with silent celerity the preparations for the descent on Sicily which ended in the triumphal march into Naples of the ever-victorious "Mille"—Bertani being one of the seven who ventured in, under the Bourbon batteries, in advance of the main body; in 1862 tending the wounded lion at Aspromonte, where he assisted Zanetti in extracting the bullet whose presence, four centimetres and a half deep under the lower extremity of the tibia, was so ingeniously proved by Nélaton; in 1867 figuring as "il chirurgo nato di tutti i campi rivoluzionari" (the born surgeon of all the camps of the revolution) in the campaign that culminated in the not inglorious defeat of Mentana; and from the completion of Italian Unity in 1870 till his death in Rome on Friday, the 30th ult., holding an isolated position in the Italian Chamber of Deputies—a Liberal on grounds that "Liberals" did not understand—and busied with his great work on the amelioration of the agricultural classes throughout the Peninsula, the results of which are embodied in his masterly "Codice Sanitario." His papers, it is said, will form a memorable book on what may be called the "ambulance system of the revolution," while filling many a gap and solving many an enigma in the as yet but half-known history of the great epopee in which the outstanding figures are Pio Nono, Victor Emanuel, and Garibaldi. Italy, whose troubles as a constitutional State threaten one day to be neither few nor small, will miss him much—long after the dying out of the regret his loss inspires in the contemporary world of science, of literature, of art, *et quantum est hominum venustiorum*.

THE SENSORY NERVES OF THE SKIN.

DR. ALFRED GOLDSCHEIDER has recently communicated to Dubois Reymond's *Archiv* the results of researches he has made upon the nerves by which sensations of temperature and pressure are conducted. He finds that the skin is not in all parts capable of perceiving variation of temperature, and that some parts can only recognise sensations of cold, other parts only sensations of heat. These, which he terms warm and cold points, are distributed between or amongst each other, but never coincide. Their general arrangement is that they are disposed in chains which pursue a slightly curved course. These chains radiate from certain points which may be termed radiation-points or temperature-centres. The chains of the cold points do not in general coincide with those of the heat points, but these radiation points are identical. The cold points are in all parts of the skin more numerous than the warm points. When the cold points are excited by either mechanical or electrical stimuli a punctiform sensation of cold is experienced, and the opposite sensation is felt when the warm points are stimulated. Goldscheider was able by stimulation of nerve trunks to excite excentric sensations of heat and cold. The temperature points were found to be insensitive to pricks and other punctiform pain excitants. Goldscheider admits, therefore, not only the existence of nerves exclusively devoted to perceptions of temperature, but specific nerves for heat and cold. The sensibility of the surface of the body to temperature presents great topical variations, and is directly dependent in any region upon the number and intensity of the temperature points—that is to say, upon the local wealth of temperature nerves,—and go hand in hand with the distribution of the great nerve trunks. Goldscheider also differentiates in the skin nerves of general sensation and specific pressure nerves. The latter terminate in certain points of the skin which are not only especially sensitive to very delicate contact, but contain also peculiar organs which excite a granular sensation on pressure. The pressure points

are arranged after the same fashion as the temperature points, but are in general much more closely aggregated. Both they and the temperature points supply us with information in regard to locality.

MEDICAL SOCIETY OF LONDON.

THE conversazione of the present year, under the presidency of Mr. R. Brudenell Carter, formed one of the most successful gatherings that has ever taken place at Chandos-street. The walls of the large room were decorated with perfect specimens of water-colour art, the property of Mr. J. Orrock, the well-known collector and artist. There were some of William Hunt's that have given to Ruskin's pen some of its most sympathetic and beautiful sentences; these water colours of fruits, though executed more than forty years ago, are by no means "ghosts of their former selves," but even now depict with so much truth the aspect of nature that the eye almost seemed to see the very translucency of the grapes and the exquisite bloom of the plums. In addition to these there were several examples of De Wint, George Barrett, and Cox. Beautiful specimens of Doulton ware, a thermopile with incandescent lamps by Mawson and Swan, microscopic specimens by Messrs. Baker, and the band of the Royal Artillery were provided for the delectation of the visitors. Dr. Douglas Powell's thoughtful and instructive address on the powers of repair and compensation in the economy contained many original suggestions, was pervaded with a subtle sense of humour, and was full of encouragement and hope for those who practise the healing art. The orator considered that other symmetrical organs than the eye were liable to sympathetic disease, and suggested that reparative processes in tissues set up similar processes in symmetrical organs; besides sympathetic disease we have also sympathetic compensation or repair. Dr. Ord proposed and Sir Joseph Fayrer seconded the vote of thanks to the orator, including a desire that the address should be printed and published. To the energy and business capacity of the secretaries, Mr. J. H. Morgan and Dr. S. West, and of the registrar, Mr. Poole, the great success of the evening must be largely attributed.

PITYRIASIS AND PHTHISIS.

EVERY physician is familiar with the cutaneous eruption occurring frequently on the chest and back of phthisical patients, which passes under the name of pityriasis versicolor or chloasma, and the fact that it is due to the presence of a fungus allied to those which cause favus and ringworm is well known; but no one has at present suspected that its presence had any significance, or that it had any real connexion with the essential lesion of phthisis. It was regarded as a fungus which took advantage, so to speak, of the exhausted and debilitated condition of the patient to take up its abode in his skin, and it occurs in other wasting diseases of a similar nature. That it is contagious and can grow on the healthy skin is shown by the story which is told of the French pathologist Lancereaux, who, wishing for a drawing of the fungus for his plates on pathological anatomy, took some skin scrapings in an envelope in his pocket, and was surprised after a time to find a plentiful crop of the parasite not only on his own chest but on that of his wife. But the fungus has now come before us in a new light, as playing a prominent part in the production of tubercular phthisis. According to the researches of MM. Duguet and Héricourt, the results of which were given to the Academy of Sciences on April 19th, certain cases of acute tuberculosis presented no bacilli or zooglœa forms; but when the tissues were treated with potash (10 to 40 per cent.), a delicate mycelium allied to that of microsporon was discovered; and on pushing the inquiry further it was found that this mycelium was more frequently present than the bacilli, being seen not only in the tubercles but also in the neighbouring healthy tissue. Similar mycelial threads can also be found in the expectoration mixed with the bacilli. When the microsporon furfur is cultivated and injected into guinea-pigs and rabbits, these animals become, without exception, tuberculous, and the same result is obtained by insufflation into the trachea of the crusts of pityriasis. Moreover, the cultures of microsporon furfur, of tubercle produced from the fungus, and those from tubercles of man are precisely the same in character. Cultivations can be made in slightly alkalinised bouillon or in milk, when it becomes possible to distinguish an aerobic and an anaerobic element. The former floats at the surface, and at a temperature of from 30° to 38° C. forms a thick membrane composed of bacilli. The latter is found at the bottom of the cultivation-tube as a mass of granulations and mycelium. The polymorphic character of the tubercle bacillus is thus manifest, and the opinion of Spina receives support as to the variety of the forms of microbes in tuberculosis. The whole question is an interesting one, and it cannot be said to be yet settled whether the various forms of low vegetable life to which we assign names are not phases in the life history of one species modified by chemical and physical conditions. The authors regard their discovery as important from the possibility of obtaining an attenuated virus.

INSANITARY BURIAL.

IN our advocacy of burial, as opposed to cremation, in the disposal of the dead, we have always taken for granted that such burial should be subject to sanitary rule. It would seem that this matter does not yet receive in some districts the attention which is its due. An inquiry held at Chorlton, near Manchester, a few days ago, brought out some strange disclosures as to the state of the parish churchyard. Various persons complained of the nuisance caused in the district by the unwholesome condition of the yard, and the sexton's evidence was even more conclusive to the same effect. It was shown that one grave which had been reopened had immediately to be closed on account of the foulness of its contents. On another occasion a body had been buried no deeper than two feet below the surface of the soil. These facts appear to show clearly that Chorlton churchyard has come to be over-filled, while the mention of bones and portions of coffins thrown up from time to time reminds us that a lighter structure than the usual wooden case is required for sanitary burial.

LUNATICS AT THE THAMES POLICE-COURT.

THE "lunatic at large" has a fair field and no disfavour at the Thames Police-court. There he can air his grievances and count on a sympathetic ear into which to pour the troubles arising out of his delusions. A few days ago the worthy magistrate at this court would seem to have held a reception for the victims of mental disease; or was it by chance that two notable specimens of the insane world appeared before his worship with what were euphemistically called "strange applications"? One applicant, a man about thirty years of age, was anxious for advice as to the acquisition of a sum of money to which he believed himself to be entitled, as a recognition of his merit in the invention of the lifeboat now in general use. The amount supposed to be due to him was considerable, the Baroness Burdett-Coutts having headed the list of subscribers with £10,000 or £19,000, we are not clear which, and it is not a matter of much moment. Another applicant, described as "a strange-looking man," was anxious to obtain protection against some persons who were trying

to poison or shoot him, and who followed him almost day and night. The "strange-looking man" handed the magistrate a list of the offenders. Mr. Lushington, of course, instantly recognised the first as a case of general paralysis of the insane, and the second as an ordinary case of delusional insanity, with a constantly besetting peril of self-murder or homicide. We are not informed as to the precise means taken for the protection of these two lunatics at large; but there can be no question as to the fact of their having been taken good care of, seeing that in future the intervention of a magistrate is to constitute the all-sufficient safeguard of *proper* treatment for the insane. The magistrate at the Thames Court would not have allowed two dangerous lunatics to leave the court unprotected after so characteristic a disclosure of their diseases.

A NON-TYPHOID PEYERIAN ULCER.

AT the last meeting of the Medical and Physical Society of Bombay, held April 2nd, the President, Dr. H. V. Carter, exhibited six specimens of a form of Peyerian ulcer, which he had not found previously described in current text-books. They had been obtained at necropsies of native patients suffering mostly from fever in the Goculdas Tejpal Hospital, Bombay; and if the most pronounced example were to be regarded as in any sense typical, it would indicate the occurrence, however occasional, of an affection which might not inaptly be termed "Indian enteric fever." Here the patient was a young male Brahman, resident, admitted on the ninth day of illness from the locally so-called "remittent fever," prostrate and anæmic, yet free from diarrhœa, and at no time in the true typhoid state. On the sixteenth day he was suddenly seized with acute peritonitis, and died two days later. The necropsy revealed as coarse lesion only numerous irregular deep ulcers in the ileum, the larger of which were obviously connected with Peyer's patches. In this, as in the other specimens, only some patches and a segment of each were involved (usually near its margin and extending laterally beyond); and elsewhere the lymph-follicles themselves, with adjacent mucosa, even up to the edge of the ulcer, were not especially implicated, the primary lesion being apparently blood-stasis in the submucosa of the follicular areas, where a peculiar abundance and restricted anastomosis of the small blood-vessels normally obtain. Sectional views and other drawings were shown, and it was mentioned that micrococci had been seen within basal blocked vessels and around others at the sides of ulcers, further histological details being reserved for a future meeting. This affection is manifestly different from the catarrhal, peptic, or tubercular ulcerations, and also from genuine typhoid, a specimen of which occurring in a native soldier was shown for comparison; but whether or not it corresponds to what in some Indian museum specimens has been designated "perforating ulcer" of the small intestine remains still uncertain, though there are at the Grant Medical Museum, Bombay, a few such specimens which the author regarded as most probably identical with his own. The ulcers being often small and without much surrounding vascularity, might possibly at times be overlooked; and without close attention, combined with the use of a lens, it might sometimes be difficult to ascertain their real connexion with follicular areas; especially, there being no prior enlargement of the adenoid masses, the relation of the isolated or smaller clusters to the smaller-sized ulcers might not be clearly apparent. Respecting the pathological diagnosis of the larger ulcers as displayed in the case above alluded to, the author quoted as not irrelevant the cautionary remark of Rokitanski (Syd. Soc. Trans., vol. 2, 1849, p. 75) that "an acquaintance with the many anomalies of the typhus process is of such importance that we would not trust the person ignorant of them to judge of a post-mortem examination in a case of acute fever." As to etiology in this preliminary communication, the narrator, dubious as regards any urban "malarious" influence, could only surmise the operation of a "septic" infection different from the "typhoid," though equally pythogenic in its nature and source; considering that the chemical and bacterial components of filth are numerous and variable enough to warrant (comparative experiment upholding) the inference that more than one pathogenous agent may at times be present in the fetid air, water, or soil of a crowded tropical city.

SANITARY IMPROVEMENTS IN IRELAND.

LAST Saturday Mr. Edwin Chadwick, at a meeting of the Association of Public Sanitary Inspectors, referred to the entire neglect of sanitary legislation which had resulted from the devotion of public attention to the exciting political events of the last few years, and pointed out that the most "mud-hovelled" districts in Ireland were the most ravaged by epidemics, and were most marked by crimes of violence and passion. He proposed, as a measure of sanitation, the compulsory subsoil land drainage, and, in some instances, surface drainage, of 150,000 farms in Ireland, which were referred to by the Registrar-General as being too small for the occupiers to live upon them without resources from England, which were now closing against them. In England the voluntary adoption of this measure of sanitation had repaid itself in ten years by a profit of 10 per cent., and Ireland, having a wetter climate than England, was in greater need of this assistance. From the accounts published of Mr. Chadwick's address it is not clear whether he proposes that this work should be undertaken by the State. The great difficulty in Ireland is the want of capital, and though we do not doubt that the investment of money in improving land would make ample return by reducing sickness and mortality, we are afraid the condition of the country is not such as to encourage capitalists to anticipate that they would find a very safe investment in Irish land improvement schemes.

EXTRAORDINARY CÆSAREAN OPERATION.

La Gazzetta degli Ospitali of the 2nd inst. reports the convalescence of a patient who performed the Cæsarean operation on herself on March 28th ult. These are the facts: A peasant woman of Viterbo, aged twenty-three, illegitimately pregnant at full term, at dawn on March 28th last, with a common kitchen knife (*con un coltellaccio da cucina*) opened her own abdomen on the right side. The wound, five inches in extent, was oblique from within outwards and from above downwards. The woman then opened the uterus in the same direction, and endeavoured to extract the fœtus. As this was at full term it could not be readily removed. The mother first drew out an arm and cut it off. To still further reduce the bulk she amputated the head, and then completely emptied the womb, extracting the placenta. She bound a broad bandage very tightly round her body, hid the fœtus in the straw mattress, dressed herself, attended to some domestic duties, and on a cart went into the city of Viterbo to show her sister a cloth bathed with blood, as a menstrual proof of her not being pregnant. On returning home, having walked about for five hours, she vomited and fainted, and the parents called in Drs. Serpieri and Baliva. Thirteen hours had elapsed from the infliction of the wound, and through it the bulk of the intestines had been protruding for six hours. The medical attendants having satisfied themselves of the complete reduction of the emptied uterus, performed abdominal toilette as well as was practicable, replaced the viscera, introduced a drainage-tube, and sutured the wound. The evening temperature was 37·7°; lochia

natural per *vias naturales*. The woman stated positively that she had had no accomplices. No unfavourable symptoms supervened. The deep wound healed, and was only superficial on the 15th of April, the eighteenth day after the self-performed Cæsarean operation. The countrywoman of Mutius Scaevola has proved that the fearless bravery of the Romans lives.

THE OPIUM TRAFFIC.

THE recent discussion in the House of Commons on the opium traffic, while it cannot be said to have added much to our knowledge of the injury inflicted by the free use of this drug, has brought into small compass the economic difficulties which surround the question of its legal prohibition. It is hardly necessary for us in these days to give in detail our professional view of the proper use of opium. On one point, however, we must say something. Sir R. Temple, in his able criticism of the motion introduced by Sir J. Pease, said that "the opium case ran on all fours with the consumption of alcoholic liquors in this country; the question throughout was merely one of temperance." With this opinion, supported though it may be in a way by scientific testimony, we cannot agree. Alcohol, as usually consumed, is rather a luxury than a poison in the ordinary sense. Herein lies its insidious danger. Opium is from first to last a drug and a poison. Its proper place is in medicine, and there only. In turning from the purely medical to the legislative aspect of the subject, we may perhaps be expected to adopt the view of Sir J. Pease—with which, indeed, we have much sympathy,—and to require the direct prohibition of the opium culture, save to the extent required for medicinal purposes. Were it not for the financial difficulty, apparently insuperable at present, and for some taint of injustice which attaches to such a course, we might even go thus far. As matters stand, however, the opening clauses of the motion, which advocate official discouragement rather than prohibition, alone seem to mark the lines of sound policy. As a governing people, we are fairly entitled to diminish, by every legal means, the demand both within and outside of India. If China has been denied her legitimate embargo and desires to impose it, we should allow her to prohibit imports of foreign opium. Within our Indo-Burmese empire, again, we should cease to subsidise opium producers, and should impose necessary restrictions on the sale of the drug. The question of compensation has been carefully gone into in the late discussion, and, indeed, it seems to us to have been much overdone in the speech of Mr. McIver. Should such changes in the way of restriction as we have indicated be gradually carried out, time being allowed for the substitution of other crops for that of opium, the aggregate loss of cultivators and of the Indian Revenue Office will not be likely to demand a ruinous sum in compensation. It is by such remedial measures, we believe, and by stimulating as far as possible a healthy dread of the evils of opium-taking among the populations of India, that we may best atone for past errors of judgment with regard to this much-mismanaged drug.

INOCULATION OF A CONDEMNED CRIMINAL.

THE following is a summary of an account in the *New York Medical Record* of the first attempt to use a condemned criminal for the solution of an important and scientific question at the Hawaian Islands. It appears that, more than two years ago, the Government procured the services of Dr. Edward Arning for the purpose of having a thorough and scientific study made of leprosy. Attempts were made to cultivate the bacillus leprae, which is uniformly found in great numbers in the diseased parts, but not in the blood, by Koch's method, using various media, but without success. Numerous inoculation experiments upon lower animals were made, but, although the bacilli would grow at the points of inoculation for a long time, the animal never became infected. At last Dr. Arning obtained permission to make an inoculation upon a condemned criminal, whose sentence was commuted to imprisonment for life. With the convict's written consent an inoculation of leprous matter was made in his arm, and bacilli were found in the sore or the scar up to fourteen months after the operation, no constitutional symptoms being observed. One further observation of importance was made by Dr. Arning: he found that in putrid leprous tissues, and even in the body of a leper who had been dead for three months, the bacilli were found in great numbers. This seems to bear against their specific pathogenetic function. Owing to difficulties with the Health Board, it is stated that it is highly probable Dr. Arning will be obliged to discontinue his work of research. With respect to the cultivation of bacillus, Dr. Neisser of Breslau appears to have been more successful than Dr. Arning, for he has recently stated that in a few cases he has observed an exceedingly slow growth, and he also claims to have recognised spores, which the Hawaian observer has, so far, failed to do.

THE RADICAL CURE OF VARICOCELE.

To the large number of operations which have been devised for the cure of varicocele yet another has been added by M. Richet, of the Hôtel Dieu. It is described in the *Revue de Chirurgie* for April by Mr. Picqué, who is disposed to laud it. The vas deferens is first separated from the bundle of veins to be obliterated and held out of the way by a thread of copper wire passed through the scrotum in an armed needle. The veins and the fold of scrotum over them are then grasped by the blades of forceps heated to a red heat, such as M. Richet uses for the destruction of hæmorrhoids. A wound of some size is left, and cicatrisation is obtained in about three weeks. M. Picqué argues that excision of the veins is the best of all the many operations for varicocele, but that it should only be undertaken by those who are quite familiar with the aseptic treatment of wounds. In cases where the surgeon is not confident of his ability to keep the wound aseptic he recommends Richet's operation. We cannot join in such advice. Richet's operation appears, from the description given of it, to be a very rude method of obtaining a result more easily, more quickly, and better obtained by other means.

SANITARY PRECAUTIONS AT BRINDISI.

THE appearance of cholera at Brindisi, though happily thus far attended with no very serious mortality, has already brought out the first signs of panic and ruffianly excess which were only too visible among the poorer Italians during a former visitation. We would fain hope that the scenes of disorder then witnessed may not again be suffered to occur. Personal and household cleanliness, a ready access to materials for disinfection, with such advice as to the management of water-supply as a municipal or parochial authority can easily communicate, will do more to arrest the subtle enemy than any armed exclusiveness of a cordon or a village mob. Practitioners and nurses live in the midst of the contagion, yet by observing such reasonable care they commonly escape its influence. We need not, therefore, despair of seeing even the more ignorant of the public follow their example, and regard this disease no longer as a destroying angel, but as a preventable pest. In the case of Brindisi and other ports the establishment of floating hospitals, of which we have as yet seen no mention, is a measure worthy of consideration. Notwithstanding

that obstacles exist in the absence of a tide or a considerable river, and the tendency to sickness in cholera which would not be lessened by exposure to rough weather, there are obvious advantages in the scheme if these difficulties can in any way be met.

JUVENILE MUSCULAR ATROPHY OF THE EXTREMITIES.

AT the séance on April 23rd of the Société Médicale des Hôpitaux, M. Joffroy gave an account of a disease which must find a place in our future nosographical literature. It is not exactly new in the sense that this was the first case described, for attention was first called to it by Charcot and Marie some months back. These observers collected the cases observed by themselves and others, which brought the number recorded up to the present time to about thirty. It is possible that as the existence of such a disease becomes more widely known cases will be more common. The disease commences in an atrophy of the muscles of the foot in an infant or young child, and it is very common for several members of the same family to be affected. In an account given by Eichhorst there were ten members in the same family thus afflicted. The atrophy affects also the muscles of the legs, and after a varying period of time attacks the hands and the arms, but never the muscles of the face or trunk. The atrophying muscles often present fibrillary contractions and cramps, and give the electrical reactions of degeneration. The case to which M. Joffroy referred, but which he was unable to exhibit to the Society, as it was a private patient, is typical of the disease. The patient was a girl, who enjoyed good health till the age of five years, when, after a slight attack of scarlatina, it was noticed that she walked with difficulty, and seemed to tumble much more than other children at play. By degrees the foot assumed the shape of talipes equinus, and it was evident that the muscles were wasting; the skin over the feet was cold and red, the sensibility normal, but the muscles failed to react to the faradaic current. Such was briefly the condition of the patient for five years, when, without any other symptom, her hands seemed to be becoming weak, and in three months' time the atrophy of the thenar and hypothenar eminences and interosseous spaces was well marked, and the movements became very limited; she could not play the piano or write; but under treatment she improved, and for the last six months there has been no evidence of the progress of the disease.

SURGICAL CONGRESS IN ROME.

ITALY is making rapid strides towards regaining the high position she held at the Renaissance, and in the century succeeding it, in the medical sciences. Of this the most recent of her congresses—that of Surgery just concluded in Rome—furnishes ample proof. Among the communications which attracted most attention at its sittings were those of Professor Antonino D'Antona of Naples on Ovariotomy, an operation in which he has had a brilliant series of successes, and of Professor Antonio Ceci of Genoa on Extirpation of the Spleen. The subject of this latter operation was a poor girl seventeen years of age, whose splenic enlargement reached to one-fifteenth of the weight of the entire body, being the most bulky of those hitherto extirpated without being followed by the patient's death. Professor Ceci's operation was quite successful, and the girl, after a month in hospital, is now in good health and fit for service. This is the seventh case in which the spleen has been extirpated in Italy, and the second in which it has been done successfully. Professor D'Antona also read a paper on Excision of the Kidney, and produced quite a lengthy *catena* of cases in which the patients had recovered with all the renal functions adequately discharged by a single kidney. These papers will shortly be accessible in a revised form to the profession and the public, and will doubtless be hailed as an earnest of the good work in operative surgery by which Italy is now resuscitating her former and better self.

THE COLONIAL AND INDIAN EXHIBITION.

THE Colonial and Indian Exhibition, which, unlike its predecessors, is imperial and not international in character, was most successfully opened by Her Majesty the Queen in state on Tuesday morning last. A beautiful May day, and the most welcome absence of the easterly winds which have so long asserted themselves, contributed to render the occasion a perfect one. The Queen was received at the main entrance by the Prince of Wales and the Executive President, and the procession, having been formed, proceeded through the building and gardens to the Albert Hall; here, after the singing by the choir of the National Anthem, and an ode written for the occasion, by special desire of the Prince of Wales, by the Poet Laureate, and set to music by Sir A. Sullivan, in which Madame Albani, a Canadian, appropriately took the solo part, an address was read by the Prince of Wales, to which Her Majesty replied, and the Exhibition was then by command of the Queen declared by the Lord Chamberlain to be open.

FALSE JOINT FROM A FRACTURE IN INFANCY.

M. BERGER recently showed a very interesting specimen at a meeting of the Société de Chirurgie of Paris. It consisted of the lower limb of a man fifty-seven years of age, who had received a fracture of both bones of the leg when only nine months old. This was followed by the formation of a false joint which prevented the man from walking. The upper fragments of the tibia and fibula were rounded off, and fitted into cup-like depressions on the lower fragments. The adjacent surfaces were eburnated and coated with dense granulation tissue (not cartilage), and were held together by a capsular ligament continuous with the periosteum and lined by a true synovial membrane. The knee and ankle joints were not ankylosed, as is often the case in such conditions. The whole limb was undeveloped, as the following measurements on the two sides show:—Length of foot 18 centim. as compared with 24 centim.; length of patella 5·0 centim., instead of 6·0 centim.; length of femur 36 centim., as against 39 centim. The muscles were not degenerated; the nerves to the naked eye were healthy; but the skin over the toes was the seat of anæsthesia and local asphyxia. The question raised by M. Berger was, whether these developmental changes were the results of the "false joint," or whether they and it were both due to one obscure trophic affection.

SANITARY FURNITURE.

THOUGH so much has been written concerning domestic hygiene, no general principle has yet been promulgated to govern the construction of furniture. Dr. Gustav Jaeger, however, seeks to supply this want. Admitting the soundness of the theory on which he founds his sanitary clothing reform, Dr. Jaeger further urges that dead wood, as well as cotton, linen, and other vegetable matter, retains its powers of absorbing noxious animal exhalations. These the living plant digests, but the dead fibre or wood only harbours such poisonous gases for a time, and then throws them off again when there is a change of temperature. For instance, if a room is closed for some days, an unpleasant odour will be noticed on re-entering. This is especially apparent in German government offices, where the innumerable shelves and pigeon-holes are made of plain unvarnished wood. Sanitary furniture must there-

fore be rendered non-absorbent by carefully polishing or painting all the woodwork, both inside and outside; and the same rule applies to the flooring, wainscoting, &c., of all habitations. A room may be cleaned and purified after infectious diseases; but very powerful fumes are required to reach the interior of a closed drawer. From a sanitary point of view, the inside, the unseen, the back parts of furniture equally require to be treated with varnish, paint, or other substance, to render the wood non-porous. In practical Germany, sanitary furniture has become an article of commerce, and in England also we have recently inspected some such furniture. To carry out the above principles, the wood employed was prepared beforehand and rendered non-porous. This process, when applied to furniture made exclusively of wood, such as wardrobes, chests of drawers, sideboards, &c., involves an extra cost of not more than 5 per cent. Old furniture may also be rendered sanitary for a small outlay, by covering the interior and unseen parts with a substance that will close the pores. The "unpleasant feeling" sometimes noticed by those who use upholstered furniture is due to the odorous exhalations stored in the vegetable fibre, and which vitiates the atmosphere of ill-ventilated rooms. The polished wooden seats of our ancestors are preferable, unless the chairs and couches are stuffed and covered with materials of pure animal fibre, dyed with fast wholesome dyes; and this, it is calculated, would necessitate an extra cost of about 10 per cent. All textile material not of animal fibre, such as the stout webbing required underneath upholstered seats, is soaked in a solution which forms an impervious coating and prevents absorption. Carpets and curtains made or adulterated with vegetable fibre are obviously incompatible with this definition of sanitary furniture. White window-curtains, we are assured, will, if examined closely, emit a sour odour when they have been in use for a little time. A woollen curtain would give rise to no such unpleasantness, even when exposed in an inhabited room for a much longer period. Thus, to sum up, Dr. Jaeger maintains that all woodwork should be rendered non-porous, the walls should be painted or the paper varnished, and the upholstery, bedding, carpets, rugs, and curtains should consist of animal fibre sanitarily dyed.

CEREBRO-SPINAL MENINGITIS.

A SERIOUS epidemic of cerebro-spinal meningitis occurred in Gottenberg in 1883. Dr. P. Silverskiold had excellent opportunities of studying the nature of the disease in fifty-eight cases, which he observed with great care and minuteness. After making many bacteriological experiments in pursuance of Pasteur's method, he came to the conclusion that the disease is not due to bacteria. He publishes in the *Eira* the result of his experience. In his opinion the disease arises from malaria, and is not the result of any excessive physical exertion or mental emotion. He founds this belief on the topographical situation of Gottenberg. On the right bank of the river lies the district of Lindholmen, in the vicinity of which are large expanses of marshy ground. Under ordinary circumstances these marshes are covered with water and comparatively innocuous, but during a prevalence of strong east wind they are completely bare; during the west winds, therefore, the marshes are covered, but during the east winds, not only are the marshes bare, but the harbour and the canals are also affected. This occurred in 1883, when there was an unusual prevalence of strong east winds, accompanied by cold dry weather. The water in the harbour fell so low as to deter ships from landing at the pier, and left a large tract of mud; the marshes were laid bare, the canals were so dry that boats could not pass along them, and the sewers, which are ordinarily covered with water, were disclosed to view. Such a large mass of decaying animal and vegetable matter thus exposed to the air could not fail to be a grave danger to health. Those employed in the open air, especially those whose occupations led them to work at the harbour or near the marshes or canals, were most susceptible to infection. On the recurrence of the west winds the epidemic slackened; but on the east winds reappearing, the number of victims increased. Those who lived near the marshy lands were the first attacked; the disease began in separate parts of the town and neighbourhood, and in no case appeared to have been carried by contagion. The complications and symptoms form a long and startling list. From the commencement of the disease the patient loses all appetite, and this disinclination to food continues during the whole course, and even in convalescence. The treatment Dr. Silverskiold found most useful was local bleeding. Choral he considered should be avoided; but morphia he regarded as invaluable.

SARCOMA OF THE RIBS, INVOLVING THE DIAPHRAGM.

M. HUMBERT records, in the April number of the *Revue de Chirurgie*, the case of a woman, twenty-one years of age, who was admitted into the Hôtel Dieu in 1883, with a sarcoma growing from the eighth and ninth ribs on the right side. M. Peyrot attempted its excision, and in so doing wounded the pleura and caused a pneumothorax. He therefore contented himself with removing the superficial part of the mass. The wound healed, and in December of the same year the patient came under M. Humbert's care. The tumour was then the size of a chestnut, ulcerated in the centre, and there were signs of pleural effusion. A second operation was performed; the surface of the tumour was freely exposed, and the seventh, eighth, and ninth ribs, which were involved in it, were divided at each side of it, nine centimetres of the bones being removed. The tissues in the sixth and ninth intercostal spaces were then divided, and the mass removed. The pleural cavity was opened, and a considerable quantity of fluid escaped from it. On cleansing this cavity a hole was discovered at its lower part; this was enlarged and explored, when the liver, colon, and coils of intestine were clearly seen. This wound in the diaphragm was closed with five catgut sutures, and then the superficial structures were sutured. For a day the patient was very collapsed, but convalescence proceeded without complication, and the wound healed except a small sinus at the lower part. Around this sinus a recurrence of the growth took place, and in December, 1885, M. Pozzi performed a third operation, under which the patient sank. The case is mainly interesting as an instance of a wound of the diaphragm which united without any inflammation of the abdominal structures. Considering the impossibility of giving complete rest to this muscle, such a result is particularly satisfactory. Where tumours are known to involve the diaphragm their removal should not be attempted; but if during an operation this muscle is injured, it should be carefully sutured, as in this case.

HYDROPHOBIA IN HOLLAND.

THE Minister of the Interior in Holland has offered to send to Paris at the expense of Government some persons bitten by rabid dogs in Overijssel; the sufferers have, however, all refused to avail themselves of the offer. A man named Leendert Jooren, of Made, who was bitten by a mad dog has consented to undergo the operation of inoculation, and has been sent to Paris. The bodies of the condemned dogs have been sent to the Government Veterinary School for anatomical examination. The law concerning muzzles is strictly enforced, a large district coming within its operation—namely, the whole of North Brabant. The condemned cats and dogs are to be burnt.

ARTHROTOMY FOR LOOSE BODIES IN JOINTS.

M. KIRMISSON recently presented to the Société de Chirurgie two cases of loose bodies in the knee-joint for which arthrotomy had been successfully performed. He assented to the view that some of these bodies are truly traumatic in nature, being broken off from articular cartilages by violence; while others, the greater number, are pathological in origin. The arrangement of the cells in the cartilage usually allows it to be determined whether a given "loose body" is traumatic or pathological in origin, but in some cases this point cannot be cleared up. M. Kirmisson suggested that the use of a drainage-tube was not necessary after arthrotomy for the removal of such loose bodies, and he also advocated including the synovial membrane in the sutures. Both these points excited considerable discussion. Some surgeons were strongly in favour of abandoning the drain; others argued that it was harmless, and might prevent serious mischief. Cases can be cited in favour of each view. Where the arthrotomy is very simple, and there is no synovial effusion, a drain appears to be unnecessary, and may be dispensed with; but if the operation be prolonged, complicated, and attended with much manipulation of the synovial membrane, or if the joint be the seat of a chronic effusion, it is much safer to insert a drain. Should a drain not be used, it is better not to insert sutures; any exudations then have a free exit from the wound; while if the wound is closed, tension may be excited. The best form of suture would be a "buried suture" of the synovial membrane preliminary to the closure of the superficial wound.

THE CHAIR OF PHYSIOLOGY IN ABERDEEN.

AT the opening of the summer session in Aberdeen, Professor Struthers spoke a few kind and well-chosen words on the appointment of Dr. McWilliam to the chair of Physiology. He traced his career from the class to the chair, and praised him not only for regular and steady work in the daily routine of a student's life, but for acquiring early the love of science and the desire to enlarge its boundaries. He magnified the uses of a university and the office of the professor, which were meant for more than the communication of everyday knowledge. The university should stimulate research and original investigation and the professor who did not show his power in these ways had not justified his appointment.

INSPIRATION OF COLD AIR IN FEVER.

THE effect of breathing cold air has been made trial of in St. Petersburg by Dr. Ivan Voitekevich on a number of patients suffering from various pyrexial diseases, enteric fever, croupous pneumonia, pleurisy, &c. His method of proceeding was to take the pulse and respiration, and also to note the temperature in the rectum, axilla, and on the surface of the chest, and immediately afterwards to apply to the patient's face a mouthpiece connected with a tube communicating with the external cold air, directing the patient to inspire deeply. The mouthpiece was removed during expiration and replaced for each inspiration. The "sittings" were usually continued for from twenty to thirty minutes, but were stopped at once in cases where the patients seemed exhausted or faint, which, however, very rarely happened. The "sittings" were usually repeated morning and evening for several consecutive days. The temperature of the ward was always noticed, and was usually between 60° and 70° F. The external temperature, which was that of the inspired air, was, as a rule, about 20° F. lower. After the "sitting" the observations on the pulse, respirations, and temperature of the patient were repeated both immediately and after the lapse of one and two hours. The results obtained showed that the temperature was lowered but slightly and for a very short time, but that a considerable diminution was produced in the frequency of both pulse and respiration. The patients, too, felt better and slept longer, but this was but temporary. The cold air appeared decidedly to lessen the bronchial catarrh from which they suffered. No evil effects were observed, but, on the contrary, the cold air treatment appeared to act in a beneficial manner.

INTERNATIONAL CONGRESS ON HYDROLOGY AND CLIMATOLOGY.

WE have received from the Foreign Office papers relating to a proposal to hold next October in Biarritz an International Congress on Hydrology and Climatology; the Congress is to be presided over by the French Minister of Commerce and Industry, and the French Government are anxious that members of scientific societies in this country should assist. The Congress will be divided into three sections, and papers are invited on scientific hydrology, medical hydrology, and climatology. The proceedings will last from Oct. 1st to the 8th, and at its close the different thermal and sanitary stations in the Pyrenean district will be visited.

PUERPERAL FEVER IN SPITE OF ANTISEPTIC PRECAUTIONS.

M. HERRGOTT of Nancy, in a communication to the Paris Academy of Medicine, mentions the cases of two women who had been confined in the same ward. In spite of the employment of the most rigorous antiseptic measures, one, who was greatly depressed physically and morally, was attacked by puerperal fever, and succumbed in three days; while the other, who had a very severe labour, entirely escaped the infection. From these facts he deduces the suggestion that, however valuable and true the doctrine of microbes may be in the generality of cases, it is not capable of explaining all the facts of infection. "Too absolute, too general rules lead observers to neglect an essential element in diseases—the patient."

ANOMALOUS KIDNEY.

M. CARTIER describes an anomalous case of kidney formation in a female patient aged twenty-three, who died of fever at the Hôtel Dieu, at Poitiers, in February. The two kidneys were joined in front of the vertebral column by their inferior extremities, forming a kind of horseshoe, embracing the spine. The junction was formed by an intermediary body, whose tissue was of a renal character, and which appeared to be a third renal organ. In addition to two ordinary renal arteries, veins, and ureters, there were three supernumerary arteries, one to each lateral part of the horseshoe and one to the centre or third kidney.

OUR CHANGEFUL CLIMATE.

ONE day in last week the thermometer rose 30° and fell 27°, all in twelve hours. This is an illustrative example of what the weather can do in this country, and collaterally—so far as those who escaped injury are concerned—the episode affords excellent proof of the adaptability of the English "constitution" to a changefulness which not many of the inhabitants of more equable climes could with impunity undergo. Whatever the weather may be for some five or six weeks to come, no prudent person should venture to lay aside winter clothing altogether for the attire appropriate to summer. "Cast not a clout till May be out," and even then make any desired change discreetly, for "fickle as the wind" is a proverb which has more than metaphorical force in England, and which it is well all who value their health should lay very practically to heart.

DEATH OF TWO PROFESSORS IN HAVANA.

THE death is announced of Dr. don Joaquin Barnet y Ruiz, Professor in the Faculty of Pharmacy of the Royal University of Havana in Cuba, caused by extensive burns produced by the ignition of a quantity of ether in the laboratory. Dr. Planellas Llanos, Professor of Botany and Zoology in the Faculty of Sciences in the same university, has also lately died from illness. He was the son of the present Dean of the Faculty of Sciences in Barcelona, and was a knight of the Order of Charles III. *La Enciclopedia*, a Cuban medical journal, lamenting his premature decease, refers especially to the practical character of his teaching, and the improvements which he made in the botanic garden, which is now in a thoroughly satisfactory condition.

TENDON-GRAFTING.

A BOY, aged fourteen, cut himself in the hand and divided both flexor tendons of the middle finger. Thirteen months later he came under M. Peyrot's care. There was then complete inability to extend the last two joints of the finger. An operation was undertaken. It was impossible to approximate the divided ends of the tendons, so a piece of a young dog's tendon was interposed between them. Unfortunately the wound suppurated, but cicatrisation took place and partial success was attained. The finger could be semi-flexed, and was constantly held partly flexed and therefore less exposed to injury than before; but the tendon was adherent to the scar. There seems to be no doubt that the engrafted tendon is really united to the boy's tendon.

FOR the vacant Chair of General Pathology in Insbruck the names of Dr. Gärtner, assistant to Professor Stricker in Vienna, and Dr. Lowit, assistant to Professor Knoll in Prague, have been proposed.

PROFESSOR WINTER is about to retire from the editorship of *Schmidt's Jahrbücher*, with which he has been connected for thirty-six years. His place will be filled by Drs. Mobius and Dippe of Leipsic.

M. RANVIER has been elected "membre titulaire" in the Pathological Anatomy Section of the Paris Academy of Medicine, the unsuccessful candidates being Voisin, Grancher, and Hanôt.

A CONGRESS of medical practitioners and workers in the field of natural science is to be held in Christiania on the 12th of July.

DR. F. BESSEL HAGEN has been appointed to the charge of the Surgical University Polyclinic in Heidelberg.

M. PASTEUR has just been appointed a Grand Cross of the Brazilian Order of the Rose.

PRAGUE is reported to be suffering from a severe epidemic of typhoid fever.

THE REMOVAL OF DUST.—On the 28th ult., at the meeting of the members of the Wandsworth Board of Works, attention was drawn to the fact that during the last four weeks the number of complaints from householders as to the non-removal of their dust was as follows:—Battersea, 215; Clapham, 30; Putney, 109; Streatham and Tooting, 128; Wandsworth, 12. It was very justly considered disgraceful that there should be in four weeks 494 complaints in a district where the sum of £9600 per annum is paid for clearing the dust, and a committee was appointed to take immediate action in the matter.

THE GERMAN MEDICAL CONGRESS.

THE fifth annual meeting of the German Medical Congress took place at Wiesbaden from April 14th to 17th, under the presidency of Professor Leyden of Berlin, in succession to the late Professor von Frerichs.

In opening the proceedings, the PRESIDENT alluded to the aims of the Congress, and the connexion between medicine and science, pointing out that in the direction of therapeutics many problems awaited solution, and here experience was of chief value, corrected, confirmed, or modified by fresh observations.

The first subject discussed was the Operative Treatment of Pleural Effusion. It was opened by Dr. O. FRAENTZEL (Berlin), who pointed out that Trousseau's dictum upon the indications for such interference remained good at the present day. In the case of sero-fibrinous effusions such indications were (1) imminent danger to life, and (2) a large amount of effusion—viz., when in the sitting posture the upper level of the fluid reaches at or above the third rib. He advocated postponement of paracentesis until pyrexia had moderated or disappeared, delaying usually to the end of three weeks, occasionally to the end of a fortnight, but rarely resorting to it earlier, these latter cases being mostly of unfavourable prognosis. At the same time he recognised the evil of delay beyond three weeks. He objected to the dorsal puncture, owing to the thickness of the chest wall and the tendency for fibrine to accumulate posteriorly, but preferred a site midway between the mammillary and axillary lines, in the fifth interspace on the left side, and fourth on the right. Aspiration rendered the operator independent of the influence of lung-pressure in regulating the amount of fluid withdrawn; but not more than 1500 cubic centimetres (i.e., about 50 oz.) should be taken. He described the various precautions necessary, and stated that he had never seen a case of sudden death during paracentesis, nor the supervention of acute pulmonary œdema (the "albumineuse expectoration" of the French), and he attributed the absence of these results to the limitation in the quantity of fluid removed. He has frequently tapped for hæmorrhagic effusion, with good result, even in tubercular subjects; but if there is much blood he does not aspirate, and never removes more than 500 cubic centimetres. In purulent effusions, if no absorption take place after aspiration, a free opening must be made, the site of election being the same as that for aspiration given above. In most cases rib-resection is necessary. After evacuating the sac it is washed out with a solution (¼ per cent.) of common salt, and a drainage-tube or metal cannula inserted, the thermometer being taken as the guide for further interference. He spoke also of the treatment of pneumothorax.—Dr. WEBER (Halle) followed, stating that paracentesis was absolutely indicated in cases where the intra-thoracic pressure hampered the circulation, as well as in all purulent and putrid effusions. In complicated cases operation could only be palliative. He would not delay interference too long; formerly, in cases of sero-fibrinous effusions, he waited for subsidence of inflammatory symptoms, but found greater risk of encountering such sequelæ as pulmonary compression, &c., and therefore resorts now to puncture within six or five days with far better results. In serous effusion it suffices to use simply a long tube to act as a syphon. He insisted on the value of exploratory puncture, bearing in mind that the fluid is often clearer and thinner in its upper layers than at lower levels. In empyemata he always employs resection of ribs, and washes out the cavity first with a solution of sublimate (1 in 5000) and then of boracic acid (3 per cent). In children a cure may be obtained in two or three weeks.—Dr. FIEDLER (Dresden) described his hollow needle and syphon-tube, and stated that he had quite abandoned the use of the aspirating syringe. He agreed with Fraentzel that interference should be delayed for three weeks.—Dr. FINKLER (Bonn) pointed out that in less recent effusions it may be absolutely necessary to use the stronger force of the aspirator-syringe, and in certain cases would combine aspiration with washing out of the sac.—Dr. LITTEN (Berlin) agreed with Dr. Weber that paracentesis should be done early, and that the presence of fever was no contra-indication; but he has seen the lung re-expand after an effusion has lasted for twelve weeks. He adopts partial resection of neighbouring ribs in empyema.—Professor JÜRGENSEN (Tübingen) said it was a great advance that all

empyemata were now radically treated; but he mentioned the liability to amyloid disease in long-continued cases of drainage. He doubted the statement that tuberculosis does not give rise to simple pleurisy.—Dr. HEUESNER (Bremen) uses a cannula and long tube in preference to the aspirator, owing to the fear of increasing the negative pressure, which may cause too great a flow of blood to the thorax.—In reply, Dr. FRAENTZEL said that in tubercular subjects he would only resort to the radical operation as a final measure. The frequency of injections of empyema sacs varied with the case; sometimes they may be needed two or three times a day, in other cases only every two days. It was often not possible to do without rib-resection.—Dr. WEBER added that, except in hæmorrhagic cases, he allowed as much fluid to flow as possible, and did not regard coughing as an indication for discontinuance. He was, on the whole, so contented with present methods as not to desire anything better.

Dr. BRIEGER (Berlin) read a paper on Ptomaines, asserting that one should rather seek to learn the chemistry of bacteria than to discover new forms. He described and demonstrated a large number of poisonous agents which he had isolated in various infective diseases (mussel-poisoning, staphylococcus aureus and pyogenes, typhus, &c.).

Dr. FICK (Wurzburg) read a paper on Variations in Ventricular Blood-pressure in Morphia Narcosis, as estimated by means of an apparatus he has devised. In a dog deeply narcotised by morphia he found a peculiar change from the normal, where the curve suddenly rises in systole, remaining high until the end of systole, when it as suddenly falls to the abscisse, where it remains throughout diastole. Instead of this, in morphia narcosis there is during diastole a slight rise; and this must be attributed to a secondary incomplete systole. Sometimes the diastole is interrupted by several such irregularities of the curve. The phenomenon is explained by morphia interfering with the systole so as to render it abortive; and as these abortive contractions do not suffice to open the valves, they are not registered in the arterial pulse.—Dr. BINZ (Bonn) welcomed the paper as a valuable contribution to pharmacology and as opening the way for other researches. It showed also that morphia is a cardiac poison.—Dr. RIEGEL (Giessen) pointed to the analogy of the phenomena with the pulsus bigeminus and alternans.—Drs. v. Busch and Auerbech also spoke.

Dr. STINTZING (Munich) read a paper on Methods of Electro-diagnosis, in which he advocated the use of Edelmann's galvanometer and his own "unit-electrode" for the purpose of more completely estimating the results of faradaic and galvanic reactions.

Professor ZIEGLER (Tübingen) contributed a paper on the Inheritance of Acquired Pathological Properties. He contended that acquired deformities and diseases are not inheritable, and in support of this referred to the process of impregnation, wherein there is a union between nuclei of the paternal and maternal organisms. Since these nuclei must be regarded as the carriers of inheritable properties, it is very unlikely that acquired properties could be transmitted. Just as difficult is it to accept Weisman's notion of development of generations of germs from an inheritance of acquired disease. It is a fact that a mental disease acquired by traumatism or intra-uterine disorder is not transmitted by an individual to his posterity. Brown-Séquard, in his experiments on inheritance, produced epilepsy in guinea-pigs; but these animals are specially predisposed to nervous disease on the slightest irritation, and it is possible that infection played a part in these experiments. According to Ziegler, malformation and acquired disease are to be referred to primary variations in the germ. These may arise by the union of ill-adapted sexual germs, by derangement of the process itself, and by injury of the sexual germ proceeding from the organism (as in alcoholism, old age, &c.)

(To be continued.)

THE GERMAN HOSPITAL.—On the 5th inst., the forty-first anniversary dinner of the friends and supporters of this institution was held, under the presidency of Prince Christian. It was stated that during last year the number of in-patients at the hospital was 1721, and the total benefited during that period was 25,353. The guests numbered 220, and during the evening subscriptions and donations amounting to £3672 were announced by the secretary.

INDIAN HEALTH STATISTICS.

No. II.

THE average number of prisoners confined in the gaols of India during 1884 was 85,496, a number estimated to be in the proportion of 4·3 per 10,000 of the general population. The admissions into hospital among them were 1025, the deaths 29·11, and the daily sick 36·9 per 1000 prisoners. This shows an increase in the cases, but a decrease in the deaths, compared with the preceding year. The prisons of Bengal were the most unhealthy; those of Madras showed much the lowest death-rate, amounting to only 20·55 per 1000; and those of Bombay furnished the lowest ratio of admissions and daily sick. The great excess of cases in Bengal was from fevers, dysentery, and diarrhœa, and the same diseases, with those of the respiratory system, were the causes of the high rate of mortality in Bengal and Bombay. In the latter the death-rate from respiratory diseases was as high as 9·58 per 1000, while in the Madras Presidency it was only 2·44.

Although there has been a decrease in the general mortality of the prisons, some of them still show an enormous death-rate. Thus, omitting all prisons with an average of less than 100 prisoners, we find that in Bengal, at Rungpore it was 256·5 per 1000, at Banda 156·8, at Jalpaiguri 156, at Mymensingh 148·9, at Chybassa 121·6, at Rajshahai 109·5, at Bogra 107·1, at Purneah 104·2, and at Almora 102·8, the principal cause of death in all being dysentery and diarrhœa. In the Bombay Presidency, the only gaol in which the rate exceeded 10 per cent. was at Nara, where it was 108 per 1000, half of the deaths being from respiratory diseases, and the other half equally divided between fevers, dysentery, and diarrhœa. In British Burmah the mortality in the Akyab gaol was 129·2, and in that of Tavoy 107·8, the high rate in the former being due chiefly to cholera, dysentery, and anæmia, and in the latter to cholera and dysentery. In the convict establishment at the Andamans the death-rate was only 15·75, the most fatal disease being phthisis, the deaths by which amounted to 3·79 per 1000. The troops on duty there also appear to have enjoyed excellent health, the admissions among the Europeans having been only 688 per 1000, with no death, and among the Native troops 826 admissions and 6·52 deaths per 1000. The sanitary sheets received from the gaols, while showing that much has been done to improve some of them, afford abundant evidence of the existence of overcrowding, defective water-supply, imperfect ventilation and drainage, unsatisfactory dietary, and in several of them insufficient clothing.

Although there has been a marked improvement in the registration of births and deaths of the general population in some of the Provinces, it is still so very imperfect as to prevent any reliance being placed upon the recorded results. It would be useless therefore to enter upon any detailed examination of the information on these subjects in the Report, or to constitute any comparison with the results of previous years, when the data were still more inaccurate. The returns show that fevers were by far the most fatal diseases, for of 5,230,756 deaths registered, they were returned as the cause in 3,306,285, or 63 per cent. of the whole. October, November, and December were the months in which the mortality from this cause was highest. Small-pox was very prevalent during the year throughout India, but especially in the North-Western Provinces and Oudh, the Madras Presidency, and British Burmah; the registered deaths by it amounted to 332,904, or 6·7 per cent. of the total mortality. Although every exertion is made to promote vaccination, it is to be regretted that a large proportion of the population remains unprotected. The returns show the numbers vaccinated at the special vaccination establishments and at the dispensaries to have been 5,104,185 in a population estimated at about 184 millions. Cholera was returned as the cause of 287,609 deaths. It was most fatal, in proportion to the population, in Assam, Bengal, Madras Presidency, and British Burmah. In Assam it was very generally prevalent, but was most severe in Nowgong. It broke out in March, reached its maximum in May, and then declined till October, when it was rekindled, and gave rise to many deaths. A very interesting history is given of cholera among the immigrant coolies, who appear to have escaped to a remarkable degree

compared with the general population. This is attributed to the improved arrangements at the depôt at Dhubri; to the avoidance of overcrowding on board the steamers; to the increased speed of transport, by which the passage has been reduced from sixteen to a little under five days; and to the improved general sanitary arrangements on board, more especially with regard to cook-houses, latrines, general and hospital accommodation. The Sanitary Commissioner remarks that "of the various explanations which have been offered to account for the diminished prevalence of cholera among them of late years, ... that an improved water-supply is the chief cause cannot be accepted, for Dr. Eteson, the present sanitary commissioner [of Assam] writes:—'The coolies, who alone are provided with protected and filtered water, alone get cholera; other passengers, who always draw water over the side and at landing places where the steamer stops and pollution is most probable, never get it. The crews of all the steamers use unprotected water, and are never attacked.'" In the province of Bengal the disease was widely prevalent, but it was most fatal in Orissa. In the Madras Presidency, Tanjore, Tinnevelly, Trichinopoly, South Arcot, and Madura suffered most severely. The greatest number of deaths occurred in January, the disease then subsiding till April; a second outbreak occurred in July and lasted till October; and it again appeared with considerable violence in December. "The cause of the continued prevalence of cholera in the Tanjore district was most probably owing to the peculiarly contaminated water-supply upon which the people are dependent," and of which some details are given in the Report. The question of the removal of persons from buildings in which cholera has broken out is one of so much importance that we must give the results obtained in India as detailed in the Report. "The effect of movement of affected bodies into other, though near, localities was, as usual, most beneficial. Among British troops cholera appeared in twenty-six communities, and in fifteen of these movements were made into camp, in three to different barracks, and in eight the disease occurred in an isolated form, and no movement was considered necessary. In ten of the fifteen movements into camp no further case occurred after movement. At Allahabad, where nineteen cases occurred in all, only one man was attacked after the affected community moved into camp. Only at Meerut was the result of the movement not so strikingly apparent. In this station the affected men were broken up into five parties, which moved into separate camps. In one party nine cases occurred in three different camps, and in another four cases in two camps, but the three remaining parties escaped without further attack. Amongst Native troops nine of twenty-one affected communities moved into camp, and in only one of them a single case occurred after movement. Amongst prisoners movements were made only at Meerut and Akyab. In the former place only two cases occurred after movement." At Akyab a reference was made to the Inspector-General of Prisons, who directed that "no delay should take place in the matter of removal, but that two-thirds of the prison population should, as soon as possible, be moved into camp. The result justified the expediency of this decision, for no sooner had the removal been commenced, and the gaol population thereby thinned, than the disease began to abate, and speedily became altogether arrested; while of the prisoners who were camped out not one was attacked."

The number of deaths from injuries registered during the year amounted to 76,583, and of these 23,028 were caused by snake bites or by wild beasts.

DR. RICHARDSON'S LECTURES ON ANIMAL OR VITAL MECHANICS.

ON Monday last Dr. B. W. Richardson delivered the first of a series of Cantor Lectures, at the Society of Arts, on "Animal or Vital Mechanics." After a brief introduction, in which he defined as natural or vital mechanics those mechanisms which are produced by nature without the interposition of man or any animal inferior to man, the lecturer placed before his audience a series of photographic and diagrammatic illustrations of numerous natural mechanical parts — the valve, the lever, the camera, the pouch, the screw, the tube, the vesicle, the column, the cord, the pulley, the muscle, and the joint. He then drew a comparison bearing on originality of design between natural and human genius for invention. On this subject there were two views: one, that natural and human inventive skill are independent of each other, though alike in character; the other, that human inventive skill is an imitation or copy from the natural—an idea which even men of scientific attainment had supported.

The lecturer, in treating on these two hypotheses, while admitting that man could not be said to have invented anything that did not exist in nature, and therefore only re-created the created, and while also admitting that in many mechanical works of nature man might find many copies, maintained, nevertheless, that the human faculty for mechanical invention is quite independent, and that man in invention as often recopied from himself without intention, as he did from nature, also without intention. As an artist man is an imitator; as an inventor he is original; the phenomena included in mechanical problems being to him abstractions, like good and evil, space and time. In support of this view, Dr. Richardson urged the following reasons: 1. That if man in his inventions were a mere copyist, he would rank lower in this respect even than insects, which were mechanics, but certainly from no studied imitation from natural objects. 2. That if man had learned all his inventions from the inventions of nature he would have been a naturalist first, and a mechanician afterwards. But, in fact, he is a wretched naturalist; a splendid mechanic. 3. That the attempts of man to copy from nature in mechanical work had been amongst the least successful of his mechanical results, as shown in his attempts from and even before the time of Borelli to make a flying machine. 4. That the skill of man in all his great mechanical results is cumulative, has its origin in smallest beginnings, and progresses step by step onwards by human skill alone. This was illustrated in the development of electricity, from the first experiment of children rubbing pieces of amber up to the telephone and microphone, in the whole of which mighty development, although the phenomena and their causes might have been found in nature, man stood alone as the inventor, without going to Nature for any copy of her designing. 5. That if man had been a direct copyist from Nature, in his mechanical work, he would not have produced such perfect mechanisms as those which he has constructed, since it is one of the most remarkable of facts that many of the most important natural instruments (for example, the eye-ball) are imperfect in details of construction, unfinished, to use a workman's term, and liable to deviation in action. On the whole, the evidence is in favour of the belief that man is endowed with independent powers of invention. This, however, does not take away from the study of Nature as a teacher. Her apparent errors may be guides; she may reveal secrets if she be carefully followed; she may certainly suggest economy of power and of adaptation; and she is ever deserving of consultation as the omnipresent and primitive mechanical organiser and worker.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Wem Rural District.—It is satisfactory to note that according to the report of Dr. R. F. Giles not a single death resulted in 1885 from any one of the specific infectious fevers, and this in a population of 10,565. But it is stated that there were one or two isolated cases of diphtheria, and under these circumstances 2 deaths from "non-spasmodic croup" may be regarded with some slight suspicion. In the general sanitary improvement which is going on, we would note that the town of Wem has received an abundant supply of good water, and the house connexions with this public service are steadily increasing. Action is also being taken in the same direction under the Public Health (Water) Act, and wells which are polluted are being closed. Clive and Shawbury call for similar activity on the part of the authority. Bye-laws are also wanted to regulate the construction of new buildings. It is often felt that because a district is not yet very populous, such regulations are not needed; whereas it is hopeless to prevent the evils of bad

building when places ultimately do become populous, in which building has been proceeding without any adequate restrictions. It is in the early stage that bye-laws do the most good. The death-rate for 1885 was 18·45 per 1000; it was much the same in 1884, and for a rural district this can by no means be regarded as being as low as it should be.

Willesden Urban District.—Dr. Branthwaite has the satisfaction of pointing out that in this district, with a population which has increased with immense strides till it has nearly reached 39,000, whereas the death-rate was 21·7 per 1000 at the beginning of the decade, it is only 16·2 at the present time. During the year 1885, small-pox was somewhat prevalent, 31 cases coming under notice. Of these, 13 were treated at home and 18 were removed to the hospital. But something of a permanent character in the way of hospital provision is much needed for this district. In the meantime disinfection is carefully carried out in all houses where infectious diseases have been known to exist. The infantile death-rate of Willesden is a very unsatisfactory feature, for the deaths of children of one year and under are as 17·2 per cent. of the births. Dr. Branthwaite again urges the need of a crèche in South Kilburn, and in the district abutting on Willesden-lane. In his opinion it would lead to the saving of many lives.

Helmsley Rural District.—Routine work continues to be made in this district and to disclose matters calling for continued activity. The risk of well-pollution has been shown to exist in Harome as the result of last year's systematic inspection, but in the case of Helmsley this question has been most satisfactorily dealt with. It is now four years since a case of enteric fever came under Dr. Low's notice in the district, and in this special instance it was regarded as due to the recrudescence of a poison ten years old. The death-rate for the district during 1885 was 16·15 per 1000 living.

Bedford Rural District.—During 1885 the general death-rate of this district on a population of 23,666 was 18·5 per 1000. Scarlatina and diphtheria were the two infectious diseases which most called for notice. As regards the latter, Dr. Prior quotes extracts from a large number of reports of the medical inspectors of the Local Government Board, and he concludes that the main outcome of the investigations referred to has been to show how strong is the evidence in favour of contagion as the great means of propagation of diphtheria, and how weak and unconnected by comparison is the evidence as to other causes. Hence he urges that it is only in the organisation of a proper system of disinfection and of isolation that safety against the diffusion of the disease can be found.

Barnsley Urban District.—Although the death-rate for 1885 was considerably below that for the preceding two years, it reached 21·9 per 1000, and as such was in excess of that for England and Wales. A serious effort has been made by the Town Council to deal systematically with infectious disease, and a fee has been offered to medical practitioners for reporting such cases. This system, to be complete, needs, as Dr. Sadler says, a well-ordered fever hospital; but we think his views as to securing the removal of first attacks are involved in difficulties which are somewhat imaginary. In other districts the same fears have been expressed, but the anticipated drawbacks have tended to disappear when adequate provision has been made. Barnsley has the advantage of an abundant and excellent water-service, of a good system of sewers and sewage disposal, and of a system of refuse removal carried out by the authority's own officials. It is also now required that in all new houses a disconnecting syphon-trap shall be provided, cutting off the chance of the passage of sewer air into house drains, and additional means of sewer flushing are to be provided. Advance in such directions should, before long, lead to a still further reduction in the rate of mortality.

Barnsley Rural District.—In this district the year 1885 was marked by a lower death-rate than any experienced since 1881; but still it cannot be regarded as a really low one, reaching as it did to 17·8 per 1000. Certain cases of enteric fever were associated with foul effluvia from sewers which, by reason of the drought, lacked sufficient flushing. Scarlet fever was also somewhat prevalent; but it is stated that, in the absence of information as to its occurrence, it was not possible to do much to check it. In several parts of the district the sewage arrangements are unsatisfactory, and the river Dearne remains very foul. When faulty sanitary conditions are met with in connexion with disease, they are, according to Dr. Sadler, remedied by removal or otherwise.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5688 births and 3518 deaths were registered during the week ending May 1st. The annual death-rate in these towns, which had been equal to 20·3 and 19·8 in the preceding two weeks, rose again last week to 20·2. During the first four weeks of the current quarter the death-rate in these towns averaged 20·1 per 1000, and was 3·7 below the mean rate in the corresponding periods of the ten years 1875-85. The lowest rates in these towns last week were in Brighton, 16·3 in Hull, 17·1 in Bradford, and in Birkenhead. The rates in the other towns ranged upward to 26·8 in Blackburn, 27·3 in Preston, 27·9 in Portsmouth, and 29·2 in Manchester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 367 and 382 in the previous two weeks, declined last week to 364; they included 138 from whooping-cough, 104 from measles, 39 from diarrhœa, 29 from scarlet fever, 28 from diphtheria, 23 from "fever" (principally enteric), and 3 from small-pox. No death from any of these principal zymotic diseases was recorded last week either in Norwich or Halifax; whereas they caused the highest death-rates in Plymouth, Preston, and Portsmouth. The greatest mortality from whooping-cough occurred in Bolton, Cardiff, and Newcastle-upon-Tyne; and measles showed fatal prevalence in Birmingham, Blackburn, Preston, Plymouth, and Portsmouth. The 28 deaths from diphtheria in the twenty-eight towns included 20 in London, 2 in Birmingham, 2 in Liverpool, and 2 in Oldham. Small-pox caused 2 deaths in Bristol, 1 in Liverpool, and not one either in London or in any of the twenty-five other large provincial towns. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had increased in the previous four weeks from 8 to 17, had further increased to 19 on Saturday last; 3 cases were admitted to these hospitals during the week, against 6 in each of the preceding two weeks. The Highgate Small-pox Hospital contained 2 patients on Saturday last, two cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 362 and 319 in the preceding two weeks, further declined last week to 296, and were 94 below the corrected weekly average. The causes of 89, or 2·5 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Blackburn, Derby, and Plymouth. The largest proportions of uncertified deaths were registered in Salford, Sheffield, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 20·5 and 20·7 per 1000 in the preceding two weeks, further rose to 23·1 in the week ending May 1st, and exceeded by 2·9 the mean rate during the same week in the twenty-eight English towns. The rates in the Scotch towns last week ranged from 17·4 and 18·5 in Dundee and Leith, to 25·4 in Glasgow and 26·0 in Paisley. The 571 deaths in the eight towns showed a further increase of 60 upon the numbers returned in the previous week, and included 21 which were referred to whooping-cough, 15 to measles, 6 to scarlet fever, 6 to diarrhœa, 2 to "fever" (typhus, enteric, or simple), 1 to diphtheria, and not one to small-pox; in all, 51 deaths resulted from these principal zymotic diseases, against 34 and 46 in the preceding two weeks. These 51 deaths were equal to an annual rate of 2·1 per 1000, which corresponded with the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 10 and 15 in the previous two weeks, further rose last week to 21, of which 18 occurred in Glasgow. The 15 deaths from measles showed a further increase upon recent weekly numbers, and were all returned in Edinburgh. The 6 fatal cases of scarlet fever, of which 4 occurred in Glasgow, also exceeded the numbers in recent weeks. The 6 deaths attributed to diarrhœa, on the other hand, showed a decline, and were 3 below the number in the corresponding week of last year. Both the deaths from "fever" were returned in Glasgow, and the fatal case of diphtheria in Greenock. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 122

and 100 in the previous two weeks, rose again last week to 123, and were within 1 of the number in the corresponding week of last year. The causes of 74, or 13 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 33·0, 25·0, and 27·3 per 1000 in the preceding three weeks, declined to 24·4 in the week ending May 1st. During the first four weeks of the current quarter the death-rate in the city averaged 27·4 per 1000; the mean rate during the same period did not exceed 19·1 in London and 18·8 in Edinburgh. The 165 deaths in Dublin last week showed a decline of 20 from the number in the previous week, and included 13 which were referred to the principal zymotic diseases, against 16 and 8 in the previous two weeks; 5 resulted from whooping-cough, 2 from scarlet fever, 2 from "fever" (typhus, enteric, or simple), 2 from diarrhœa, 1 from measles, 1 from diphtheria, and not one from small-pox. These 13 deaths were equal to an annual rate of 1·9 per 1000, the rates from the same diseases being 2·4 in London and 3·7 in Edinburgh. The fatal cases of whooping-cough, which had been 11, 5, and 4, in the three preceding weeks, were again 5 last week. The deaths from "fever" showed a decline from recent weekly numbers. Six inquest cases and 4 deaths from violence were registered; and 50, or nearly a third of the deaths, were recorded in public institutions. The deaths of infants were fewer than those returned in any previous week of this year, and those of elderly persons also showed a decline. The causes of 19, or nearly 12 per cent., of the deaths registered during the week were not certified.

Correspondence.

"Audi alteram partem."

FOREIGN GRADUATES AND THE MEDICAL BILL.

To the Editor of THE LANCET.

SIR,—Before the proposed Medical Bill becomes law will you not raise your always liberal voice on behalf of foreign graduates? It is proposed to admit to the Register only foreign degrees which grant the right to practise in their respective countries. This will be a great injustice to all holders of German, Dutch, Swiss, and Brussels degrees, which are quite as honourable as those of America, France, Austria, and Italy, although they do not grant a licence to practise, the State Boards performing this function in Holland, Germany, and Switzerland. The precaution of admitting to the Register only such degrees as are licences to practise may be a useful one for future purposes, but it must be a serious injustice to those who have obtained foreign degrees in the past. To admit an American M.D. to the Register and to refuse a Berlin M.D. will be to bring social obloquy upon the holder of the latter, perhaps even amounting to professional ruin, for the unthinking public will naturally believe that the State recognises the one and stamps the other as inadequate. Surely the least the Government can do is to register all existing foreign degrees properly acquired by already registered practitioners. This is not granting the licence to practise to men holding such degrees, for their British diplomas give them already that privilege; it is merely protecting them from grave injustice, annoyance, and serious professional loss.

I am, Sir, yours truly,

Sheffield, May 4th, 1886. H. J. HARDWICKE, M.D.

TWO CASES OF SPINA BIFIDA.

To the Editor of THE LANCET.

SIR,—In the number of the *Dublin Medical Journal* for March last, I find this remark regarding spina bifida: "As a prognosis is nearly all a surgeon can offer to many spina bifida patients, &c." Perhaps it is too much to expect that by this time, after repeated notices in the journals and the issue of the report of the London Clinical Society, all surgeons ought to be aware that the great majority of such can now be saved both from a fatal prognosis and termination, so far as the malformation itself is concerned. Permit me, then, to mention that since the beginning of this year two cases have been sent to me by other medical men, both of which have been successfully treated. The first of these, a lumbar case aged four weeks, was operated on on Feb. 12th, and required only one injection of the iodo-glycerine fluid. The second, aged three weeks, was injected on March 16th, again on March 30th, and again on April 16th. This is a sacral case. In each the tumour is now shrivelled and flat, and the children are now safe from the risk of death due to the deformity. Further details of these cases may be given along with many others, at an early date.

I am, Sir, yours &c.,

Glasgow, May 3rd, 1886. JAMES MORTON.

SYNCOPE IN ADOLESCENTS.

To the Editor of THE LANCET.

SIR,—Can you afford me a little space to call attention to a clinical fact of some moment, which is not sufficiently known, or, if known, not sufficiently acted upon in the interests of science and for the welfare of our patients.

An adolescent was sent to me with the statement that he had nearly fainted on three different days, but he did not become insensible. He came with the request that I would ascertain the cause of his faintness. Cases of the kind have happened to me under similar circumstances so many times, and their relief at first has been so unsatisfactory and difficult, that my experience may be of value to others, for I have established a fact. I have already incidentally referred to this fact in a former communication, but not so clearly or with such certainty as I wish to do now.

When such cases come under my investigation, I immediately and invariably examine the urine, instead of the heart, and generally find it loaded with albumen. It is therefore highly important that the urine should be examined and the kidneys treated by nitro-glycerine, rather than the heart auscultated and tonics prescribed, "because of the patient's extreme debility and feeble action of his heart, &c." as is usually the case. I have sometimes found, on examination of the heart and pulse, that, besides the marked albuminuria, there exists a heaving heart and somewhat rigid arteries—conditions incidental, I believe, in adolescents, more to the "age of puberty" than to the state of the kidneys. But often, as in a case at present under my care, the heart is really feeble and the pulse totally devoid of the signs of a kidney pulse; and had it not now been my invariable rule to examine the urine in preference to the heart, I should doubtless have prescribed a tonic regimen, to the detriment of my patient. The treatment for the two conditions is so opposite that I do not hesitate thus to call special attention to it: a feeble heart and pulse being relieved by tonics, good food, and stimulants; while congested kidneys are alone cured by a hot bath, nitro-glycerine, an aperient, and milk only as a diet. With such treatment this syncope of adolescents is usually cured in a few hours, and with daily prudence for some time there will be no return of syncope or albumen, and the patient will express himself as vigorous again. I am, Sir, yours obediently,

CLEMENT DUKES, M.D. Lond., &c.,

Rugby. Physician to Rugby School.

THE USE OF COCAINE IN SURGERY.

To the Editor of THE LANCET.

SIR,—If you are not tired of publishing notes of the various merits of cocaine, the following may perhaps be of interest.

I recently had occasion to stitch up a ruptured perineum some weeks after labour. The first step was the insertion between the edges of the tear of a pledget of cotton-wool soaked in a 20 per cent. solution of cocaine. This was at 12.30 P.M. I then proceeded to get the operating table in order and arrange my instruments, which took twenty minutes. At 12.53 P.M. the patient took up her position in the lithotomy attitude, and I was able to inject two minims of the same solution into either side of the rent painlessly. Leaving that to take effect, I occupied myself with other matters, such as threading needles, &c. At 1 P.M. I was able to pare the edges and insert deep sutures without any pain. The operation took

some time owing to the irregularity of the rent, and at about 1.25 I had to inject one drop here and there. This enabled me to finish the operation, during the whole of which the patient felt no pain. She conversed freely throughout, and I had the great advantage of her intelligent obedience, instead of the usual restlessness of a patient under chloroform. Thus, in time cocaine is economical, as while it is taking effect the surgeon can be attending to matters which, with chloroform or ether, must be seen to beforehand; and there is also a saving in money, as no assistant is required, and the actual cost will bear comparison with that of chloroform. This operation cost me twenty minims of a 20 per cent. solution, or four grains, which, at 1¼*d.* a grain (the present price), comes to 7*d.*

I have also performed circumcision on a young man at a cost of five minims, or one grain, = 1¼*d.* The operation, including the arrangement of the patient and instruments, occupied twenty minutes only. Of course, in this case the original injection of the cocaine—one drop of a 20 per cent. solution into four separate parts of the prepuce—was painful, but if a very fine needle is used the discomfort is trivial.

Another advantage of cocaine (though a decided disadvantage sometimes) is that, whereas œdema coming on after an operation often strains the stitches more than can well be calculated upon or allowed for at the time, the injection of the drug rapidly induces this swelling; and the tension put upon the sutures in tying them will be found suitable to the subsequent condition of the parts.

I look upon cocaine as a special boon to the general practitioner who has to work single-handed or with inefficient assistance. I am, Sir, yours faithfully,

Tottenham, May 3rd, 1886. A. OGIER WARD, M.B. &c.

"THE PRIZE SYSTEM."

To the Editor of THE LANCET.

SIR,—Your correspondent, "F.R.C.S.," sends you an interesting extract showing Sir Benjamin Brodie's opinion of giving prizes to medical students. In his autobiography he is still more emphatic, and the opinion of a surgeon so successful in the highest sense of the term must carry weight. He says: "I had leisure to make my own observations, to think and reflect. Nor was this style of education peculiar to myself. I remember when Mr. Abernethy complained that Lawrence would not attend lectures. My friends and contemporaries, Jeffreys and Lawrence, took the same course; and so it had been with Nicolson, who was some years in advance of us. I can easily conceive that, if I had been compelled to sit on the benches of a theatre four or five hours daily, or tempted to compete for prizes as students are, and to get crammed for various examinations, my position in life afterwards would have been very different from what it has been in reality."

I am, Sir, yours &c.,

Wimpole-street, May 2nd, 1886. G. BUCKSTON BROWNE.

TRAINED NURSES IN INFECTIOUS CASES.

To the Editor of THE LANCET.

SIR,—The now numerous institutions for the supply of trained private nurses meet a great public want, and I believe that upon the whole they are well managed and deserve the success which they have attained. Having recently had occasion to make inquiries as to the precautions observed by some of them with regard to infectious cases, I find that there is a considerable difference in their practice in this respect. The rules of the Nottingham and Notts Nursing Association—to quote an example—require that a nurse upon leaving an infectious case shall not only undergo a thorough disinfection of person and clothing, but shall remain in quarantine for two weeks before taking charge of another patient. This is as it should be; and similar rules are enforced at Sheffield, and no doubt at many, if not most, other centres. Recent experiments tend to make us very sceptical as to the entire trustworthiness of many of the ordinary processes of disinfection, and in view of the possibility of a nurse herself acquiring the disease or conveying infection in spite of disinfectants, the period of quarantine must be regarded as a wise and necessary precaution. It is, therefore, with some surprise that I find it ignored by at least one institution, nurses being sent, after ordinary disinfection, to new patients immediately after returning from infectious cases.

In one instance which came to my knowledge recently, a nurse returned from a fatal case of diphtheria and was next day sent to take charge of a case at a distance. This second case also subsequently proved to be diphtheria, and ended fatally. The nurse, being questioned as to the nature of the illness of her former patient, asserted that it was "croup." The diagnosis of diphtheria was made within a few hours after the arrival of the nurse, so that it seems highly improbable that the infection was brought by her, but the possibility of this led to inquiries, and thus to the discovery of the facts already stated. How far other nursing institutions share this custom I cannot say, but such laxity is a source of danger, and is unworthy of an institution which appears to enjoy the confidence of the medical profession and the public. Most practitioners would, I think, hesitate knowingly to expose their patients to the risk of being attended by a nurse fresh from an infectious case, especially where they have no means of judging of the efficacy of the safeguards adopted. In the absence of any provision for obtaining the consent of the responsible medical attendant to such a course, it is incumbent upon the managers of nursing institutions to recognise their full responsibility and to take all reasonable measures of precaution.

I am, Sir, yours faithfully,

B. A. WHITELEGGE, M.D., B.Sc.,

May 3rd, 1886. Medical Officer of Health, Nottingham.

"ON THE RATIONAL TREATMENT OF HYDROPHOBIA."

To the Editor of THE LANCET.

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Burdwan, April 13th, 1886. G. C. ROY, M.D., F.R.C.S.

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(*From our own Correspondent.*)

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Much local interest has been caused by the proposals in Parliament to make illegal the employment of women on the pit-brow of coal mines, and much correspondence, both for and against, has taken place in the local papers on the subject. Judging from what one sees and hears, the desire of the women themselves is strongly in favour of being allowed to continue at the work, and although, to a stranger passing, for instance, on the railway through the Wigan district, the first sight of these women attired in semi-masculine costume is likely to produce a strong feeling against such an employment, yet a closer acquaintance with the workers and inquiries into their living and habits show that it com-

some time owing to the irregularity of the rent, and at about 1.25 I had to inject one drop here and there. This enabled me to finish the operation, during the whole of which the patient felt no pain. She conversed freely throughout, and I had the great advantage of her intelligent obedience, instead of the usual restlessness of a patient under chloroform. Thus, in time cocaine is economical, as while it is taking effect the surgeon can be attending to matters which, with chloroform or ether, must be seen to beforehand; and there is also a saving in money, as no assistant is required, and the actual cost will bear comparison with that of chloroform. This operation cost me twenty minims of a 20 per cent. solution, or four grains, which, at 1¾*d.* a grain (the present price), comes to 7*d.*

I have also performed circumcision on a young man at a cost of five minims, or one grain, = 1¾*d.* The operation, including the arrangement of the patient and instruments, occupied twenty minutes only. Of course, in this case the original injection of the cocaine—one drop of a 20 per cent. solution into four separate parts of the prepuce—was painful, but if a very fine needle is used the discomfort is trivial.

Another advantage of cocaine (though a decided disadvantage sometimes) is that, whereas œdema coming on after an operation often strains the stitches more than can well be calculated upon or allowed for at the time, the injection of the drug rapidly induces this swelling; and the tension put upon the sutures in tying them will be found suitable to the subsequent condition of the parts.

I look upon cocaine as a special boon to the general practitioner who has to work single-handed or with inefficient assistance.

I am, Sir, yours faithfully,

Tottenham, May 3rd, 1886. A. OGIER WARD, M.B. &c.

"THE PRIZE SYSTEM."

To the Editor of THE LANCET.

SIR,—Your correspondent, "F.R.C.S.," sends you an interesting extract showing Sir Benjamin Brodie's opinion of giving prizes to medical students. In his autobiography he is still more emphatic, and the opinion of a surgeon so successful in the highest sense of the term must carry weight. He says: "I had leisure to make my own observations, to think and reflect. Nor was this style of education peculiar to myself. I remember when Mr. Abernethy complained that Lawrence would not attend lectures. My friends and contemporaries, Jeffreys and Lawrence, took the same course; and so it had been with Nicolson, who was some years in advance of us. I can easily conceive that, if I had been compelled to sit on the benches of a theatre four or five hours daily, or tempted to compete for prizes as students are, and to get crammed for various examinations, my position in life afterwards would have been very different from what it has been in reality."

I am, Sir, yours &c.,

Wimpole-street, May 2nd, 1886. G. BUCKSTON BROWNE.

TRAINED NURSES IN INFECTIOUS CASES.

To the Editor of THE LANCET.

SIR,—The now numerous institutions for the supply of trained private nurses meet a great public want, and I believe that upon the whole they are well managed and deserve the success which they have attained. Having recently had occasion to make inquiries as to the precautions observed by some of them with regard to infectious cases, I find that there is a considerable difference in their practice in this respect. The rules of the Nottingham and Notts Nursing Association—to quote an example—require that a nurse upon leaving an infectious case shall not only undergo a thorough disinfection of person and clothing, but shall remain in quarantine for two weeks before taking charge of another patient. This is as it should be; and similar rules are enforced at Sheffield, and no doubt at many, if not most, other centres. Recent experiments tend to make us very sceptical as to the entire trustworthiness of many of the ordinary processes of disinfection, and in view of the possibility of a nurse herself acquiring the disease or conveying infection in spite of disinfectants, the period of quarantine must be regarded as a wise and necessary precaution. It is, therefore, with some surprise that I find it ignored by at least one institution, nurses being sent, after ordinary disinfection, to new patients immediately after returning from infectious cases.

In one instance which came to my knowledge recently, a nurse returned from a fatal case of diphtheria and was next day sent to take charge of a case at a distance. This second case also subsequently proved to be diphtheria, and ended fatally. The nurse, being questioned as to the nature of the illness of her former patient, asserted that it was "croup." The diagnosis of diphtheria was made within a few hours after the arrival of the nurse, so that it seems highly improbable that the infection was brought by her, but the possibility of this led to inquiries, and thus to the discovery of the facts already stated. How far other nursing institutions share this custom I cannot say, but such laxity is a source of danger, and is unworthy of an institution which appears to enjoy the confidence of the medical profession and the public. Most practitioners would, I think, hesitate knowingly to expose their patients to the risk of being attended by a nurse fresh from an infectious case, especially where they have no means of judging of the efficacy of the safeguards adopted. In the absence of any provision for obtaining the consent of the responsible medical attendant to such a course, it is incumbent upon the managers of nursing institutions to recognise their full responsibility and to take all reasonable measures of precaution.

I am, Sir, yours faithfully,

B. A. WHITELEGGE, M.D., B.Sc.,

May 3rd, 1886. Medical Officer of Health, Nottingham.

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pares favourably with that of female mill hands and factory operatives, while for health and physical vigour the advantage is undoubtedly on the side of the colliery women.

HOSPITAL SATURDAY AND SUNDAY.

The total sums received this year from the hospital collections amount to £7484, £4605 11*s.* being from the Hospital Sunday Fund, and £2878 9*s.* from the Saturday Fund. Considering the large number of unemployed during the past winter, and the exceptional demands upon the generosity of the charitable part of the community, it is satisfactory that the amount has reached so much.

During the past few weeks measles has become very prevalent in some parts of the district and the adjoining township of Withington, and the schools have, by order of the sanitary authority, been closed until the middle of this month.

Manchester, May 3rd.

EDINBURGH.

(*From our own Correspondent.*)

OPENING OF THE SUMMER SESSION.

THE summer session in the Edinburgh Medical School was opened at the beginning of this week, and it is satisfactory to learn that the number of students flocking to the city is still constantly on the increase. The number of courses of instruction, both practical and systematic, is also considerably augmented. Amongst these additions may be noted Dr. Berry Hart's course on Midwifery and Diseases of Women, at the Royal College of Surgeons; Dr. Caird's course of Operative and Practical Surgery; and Dr. Barbour's course on Obstetrics and Gynæcology. These, and the large series of other courses to which they are additions, form the basis of the far-spreading system of extra-mural education which is so largely developed in Edinburgh, and which, by its active competition with the corresponding curricula within the University, have done much to maintain the efficiency of university teaching. These valuable additions to the strength of the extra-academical school must, therefore, be looked upon as bearing most favourably and directly upon the maintenance of a high standard in our medical education.

IRELAND.

(*From our own Correspondent.*)

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE banquet given last week by the President, Sir Charles Cameron, was a magnificent success, and 186 guests sat down to dinner, which was sumptuously served. The toasts were numerous, and included "The Municipality," proposed by the Vice-President of the College, Mr. William Stokes, and "The Medical Licensing Bodies," by Mr. Macnamara. The latter toast was responded to by Sir George Paget, K.C.B., the Provost of Trinity College, the President of the College of Physicians, and the Governor of the Apothecaries' Hall. The *ménu* cards were very elaborate, and, besides bearing the name of each individual guest, had three engravings—viz., the Pole Gate Guildhall of Dublin Surgeons, sixteenth century; the Royal College of Surgeons, Ireland, in 1810 and 1886. The statue of Mr. William Dease erected by his grandson, Mr. O'Reilly Dease, D.L., which was unveiled last week, is placed, as has been previously mentioned, in the entrance hall of the College. It bears the following inscription:—"William Dease, one of the Founders of this College, and afterwards its President, and first Professor of Surgery. Obiit 1798. Sir Charles A. Cameron, Knt., President; William Stokes, Vice-President; William Colles, Secretary. April, 1886."

CARIES OF THE SPINAL COLUMN.

Mr. William A. Elliott, of this city, has had more experience in treating deformities to which the human frame is liable than almost any other surgeon practising in Dublin, and therefore reference to a monograph lately published by him on caries of the spine may be considered as worth mentioning. As Mr. Elliott truly remarks, in no department of surgery has there existed more discrepancy of opinion than respecting the general treatment of spinal caries, but the greatest preponderance of opinion is in favour of the adoption of some form of local counter-irritation, and the use of some mechanical appliance to afford support to the diseased spine. The local treatment Mr. Elliot recommends is the application of small blisters applied at each side of the spinous process of the affected part, and left on only to allow the skin to be reddened, and not intended to produce vesication. As regards abscesses connected with the disease, he adopts the method for opening them recommended by Abernethy—that is, a valvular incision. He considers that mechanical support should be used early, and he points out that the most difficult portion of the spinal column to retain motionless is that which extends from the first cervical down to about the sixth dorsal vertebra. The mechanical appliance he adopts in caries of the cervical vertebræ is made of thick leather, known as "tanned," but not curried, which, before using, is soaked in warm water, so as to make it pliable. The leather is then cut so as to pass well over the shoulders, chest, and back. It may then be made to pass upwards and round the neck, and sufficiently high to allow the occiput and lower jaw to rest upon it. A bandage is then applied over the entire surface of the leather, on the removal of which an accurate mould will be made of the parts; and, when perfectly dry, the instrument should be lined with thick chamois leather, with straps and buckles to keep it firmly on the patient. When the disease is situated in the upper dorsal vertebræ, the appliance can be made available by attaching to its lower and back part a piece of the same description of leather sufficiently long to pass down to the lower part of the dorsal vertebræ, round the body, and made to lace in front; while the corset for cases of caries of the dorsal or lumbar region should nearly close in front, and should extend from the axillæ downwards over each crista ilii.

CORK HOSPITAL FOR WOMEN AND CHILDREN.

The new building was opened last August, and the number of applicants for admission since the new hospital has got into working order shows that the extra accommodation has been taken advantage of by the public. During the past year 203 intern patients were treated in the wards, and the average cost of each bed came to £39 5*s.* Towards the expenses of the building the necessary amount has been subscribed, with the exception of about £400, while Mr. Crawford has generously assisted the board by a donation of £440 towards the furnishing of the new institution.

THE RIVER LIFFEY.

A member of the Dublin Corporation has given notice that at the next meeting he will move for a committee of twenty members to report to the Council on the practicability of carrying out a scheme of intercepting sewers, at a cost not exceeding £120,000.

Dublin, May 4th.

BELFAST.

(*From our own Correspondent.*)

JOHN WOODS BECK, M.D.

IT is with regret I have to announce the death of Dr. Beck, which took place at his residence in Belfast on May 2nd. Dr. Beck studied at the University of Glasgow, where he graduated in 1839, and since that time he has been engaged in practice in Belfast, so that he was one of our oldest medical practitioners. Prior to the establishment of the Irish dispensaries in 1852 he was one of the Poor-law officers, and during the severe epidemics of cholera which visited this town he took an active part. Although very well known in local circles, Dr. Beck came little before the public. He was most popular among the poor and enjoyed a good reputation as an obstetrician, and was much consulted by them in reference to children's ailments. Dr. Beck had been unwell for the past three months, and died in his sixty-seventh year. One of his sons, Dr. F. E. Beck, is engaged in active practice in Belfast.

THE RIVER LAGAN NUISANCE.

A very influential deputation appeared before our Town Council on Saturday in reference to the Lagan nuisance. This deputation came, first, to express dissatisfaction that no direct provision had been made in the Main Drainage

Bill for the purpose of cleansing the river; secondly, to urge the Town Council to carry out immediately the connection of the Ballynafeigh sewer with that of the Lagan village in accordance with the original plans; and, next, to protest against Clause 75 of the Main Drainage Bill, which, it was contended, throws upon the borough at large the expense of completing certain sewers, the cost of which should fall on the owners of property in the immediate locality. One of the deputation referred to the triumphant return of Dr. Graham, Alderman in Cromac ward, against the formidable opposition of a gentleman who had been Mayor of Belfast, as one of the proofs of feeling which existed on this subject among the inhabitants. The deputation having been heard, it was proposed to refer their views to a committee, when Alderman Graham, who was returned on the Public Health platform, moved an amendment that orders be given for the immediate completion of Ballynafeigh and Lagan district sewers, and that the executive sanitary inspector be instructed to examine into and report on the sanitary state of the river Lagan, also as to the best means of affording immediate relief, and the probable cost of so doing. Dr. Graham pointed out that, even if the new works should be completed in seven years, the greater part of the sewage now discharged into the river would still remain, and that vast quantity of filthy sludge and fæcal matter would be a source of disease for twenty years after. In the debate which followed, one of the speakers advocated a plan of removing the nuisance—viz., to narrow the stream and put on two sets of floodgates to keep the water always at high level, and then, when the gates were opened to admit lighters, the scour would be so great as to carry the offensive matter out to sea. Dr. Graham's amendment was defeated by twenty-five votes to six, and the matter now stands referred to the Improvement Law and Public Health Committees. It is to be hoped that our municipal fathers will give some real attention to this intolerable nuisance, which is yearly getting worse, and which is certainly a disgrace to a town of such size and prosperity as Belfast.

HEALTH OF BELFAST.

Dr. Browne, officer of health, states that since his last monthly report the medical officers of health of the several dispensary districts have returned only four cases of zymotic diseases as having occurred among the poor—viz., two of typhus and two of scarlet fever. The total births registered in the four weeks ending the 25th ult. amounted to 541, the total deaths to 450, showing a natural increase in our population of 91 individuals. There were 77 deaths among infants under one year of age, and 78 of persons at or above sixty years of age. The average death-rate from all causes in the month was 26·1, from lung disease 11·9, and from zymotic diseases 1·8, in a population estimated at 221,000. The death-rate in children under one year of age was 4·5, and amongst persons at and above sixty years 4·6. The deaths from zymotic diseases show a death-rate of 1·8, a very low figure.

THE VACANT CORONERSHIP FOR SOUTH ANTRIM.

Dr. M'Ninch (Ballyclare), Dr. Spearing, Dr. Taggart, and Dr. J. J. Adams (Antrim) are candidates for the vacancy caused by the death of Surgeon-Major Taggart. Their election addresses have appeared, and a very active canvass of the voters is being made.

PARIS.

(From our own Correspondent.)

THE ASSOCIATION GÉNÉRALE DES MÉDECINS DE FRANCE.

THE twenty-seventh annual meeting of the Association Générale des Médecins de France, which took place on Sunday in the large ampitheatre of the Assistance Publique, was unusually well attended, not only by the Paris members of the Association, but also by a great number from the provinces. There were two circumstances that probably formed the attraction of the meeting: the election of a President and the promotion as Commander of the Legion of Honour of M. Henri Roger, whose tenure of office as President of the Association had just expired. M. Roger has, however, been almost unanimously re-elected for another period of five years, and as soon as he was proclaimed he returned to the seat he had just vacated. He had on his right Baron Larrey, and on his left the celebrated Ricord, who, notwithstanding that he is in his eighty-sixth year, was looking hale and vigorous." He certainly has not changed much in features during the last twenty years; and were it not for a slight stoop and a little slowness in his gait, he would never be credited with his weight of years. He has scarcely a wrinkle on his face, and his hair is still luxuriant, being of an auburn colour, and almost entirely unmixed with white. In reading his report for the past year, Dr. Foville, the General Secretary of the Association, took the opportunity of congratulating M. Roger, not only on his re-election as President, but also on his promotion to Commander of the Legion of Honour. In referring to this latter circumstance, he drew the attention of his hearers to the fact that any Government, of whatsoever character, would in honouring such a man honour itself. The General Secretary, as well as two or three other speakers who followed him, also attested to the prosperous condition of the Association in every respect. Its great utility has been pointed out, and as it possesses a capital amounting to a million and a half of francs, or £60,000, the Association will now be enabled to extend succour to a greater number of applicants (who are, unfortunately, on the increase), which is the principal object of the Association.

M. PASTEUR.

I have had an opportunity of revisiting M. Pasteur's laboratory in the Rue d'Ulm, under the following circumstances:—A young lady, a daughter of Mr. Morisini, the well-known banker of New York who was said to have been bitten by a mad dog, was brought to Paris to undergo M. Pasteur's anti-rabic treatment. The young lady was accompanied by her parents and by Dr. Bulkley, the celebrated dermatologist of New York, who asked me to introduce him to M. Pasteur. This I gladly consented to do, and on Monday morning, the 3rd inst., the day after their arrival in Paris, the young lady was inoculated with the anti-rabic fluid. But before the operation was performed M. Pasteur, as is his wont, inquired particularly into the circumstances of the case. Dr. Bulkley furnished the necessary information and produced a certificate from a well-known veterinary surgeon testifying to the dog having been really affected with rabies. The young lady was bitten on April 14th on the space between the root of the nose and the inner angle of the right eye, which was soon after freely cauterised with the nitrate of silver by Dr. Bulkley. Nineteen days had therefore elapsed between the accident and the inoculation. During my visit at the laboratory it struck me that the hydrophobia scare had not lessened, for the place was crowded with applicants from all parts of the world. M. Pasteur is as zealous as ever, and I learn that the Emperor of Brazil has conferred on the eminent biologist the Order of the Rose.

Dr. Ranvier has been elected Member of the Academy of Medicine, and M. Chauveau Member of the Academy of Sciences in the Veterinary Section, in the room of M. Bouley, deceased.

Paris, May 5th.

THE SERVICES.

WAR OFFICE.—Army Medical Staff: Brigade Surgeon Samuel Fuller, to be Deputy Surgeon-General, vice J. O'Nial, C.B., promoted; Brigade Surgeon Thomas Norton Hoysted, to be Deputy Surgeon-General, vice W. Skeen, M.D., deceased; Surgeon-Major John James Chappell, M.D., to be Brigade Surgeon, vice S. Fuller; Surgeon-Major William Cherry, to be Brigade Surgeon, vice T. N. Hoysted.

ADMIRALTY.—The following notice is substituted for that which appeared in our columns on the 17th ult.:—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon William Connolly, M.D., has been placed on the retired list, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets.

The following appointment has been made:—Thomas S. Morley, to be Surgeon and Agent for the districts of Burton-on-Humber, New Holland, and Ferriby.

ROYAL NAVAL ARTILLERY VOLUNTEERS (BRISTOL BRIGADE).—William Edwd. Pountney, M.D., to be Surgeon.

THE Leicester Board of Guardians on the 4th inst. passed a resolution, by twenty-six to eight, forbidding prosecutions under the Vaccination Acts.

ROYAL COLLEGE OF PHYSICIANS.

AT the ordinary Comitia of Fellows of the College on the 6th inst., Sir W. Jenner, Bart., President in the chair, the following gentlemen were elected to the Fellowship:—Edward Seaton, M.D. Lond.; Heinrich Port, M.D. Erlangen; Edwin Rickards, M.B. Oxon.; John Abercrombie, jun., M.D. Camb.; James Kingston Fowler, M.D. Camb.; Nestor Isidore Charles Tirard, M.D. Lond.; Donald McAlister, M.D. Camb.; George Gulliver, M.B. Oxon. Dr. Dyce Duckworth, Treasurer of the College, was elected Representative of the College in the General Medical Council, in the room of Sir H. Pitman, resigned.

The Murchison Scholarship was awarded to Mr. John Stuart Hutton, of St. Thomas's Hospital. There were eleven candidates, all of high order of merit. The President, in making the award, referred to the character and work of Dr. Murchison, in whose memory the scholarship was founded.

A communication from the Association of Persons holding Sanitary Science Certificates, requesting the aid of the College in procuring for the holders of such certificates a right to registration, was referred to the Medical Bill Committee. A communication was also received through the Foreign Office on behalf of a proposed International Congress in Hydrology and Climatology to be held at Biarritz in October.

The Medical Bill Committee presented an *ad interim* report, which was adopted. It pointed out that the 3rd clause of the Bill would deprive the College of its privilege of granting licences to practise medicine, surgery, and midwifery, and recommended that a deputation should be sent to Sir Lyon Playfair on the subject, and that Sir R. Webster, M.P., Sir H. Holland, M.P., and Dr. Farquharson, M.P., be requested to watch the progress of the Bill.

The proposals of Dr. West that standing committees should be appointed upon (1) educational matters, (2) matters of professional interest, and (3) matters of public interest, were then discussed; and the report of the Council, which was unfavourable to the scheme, was carried by a large majority.

MEDICAL NOTES IN PARLIAMENT.

Medical Acts Amendment Bill.

IN the House of Commons, on the 3rd inst., in moving the second reading of the Medical Acts Amendment Bill, Sir Lyon Playfair said that since 1870 twenty-one or twenty-two Bills upon the same subject had been brought before the House, but owing to the interests affected, and the jealousies of the different medical bodies, those Bills had all failed. He trusted that the present Bill would settle all the difficulties which had so much disturbed the minds of medical men. There were 16,000 medical men throughout the country. Those men went upon the Register and practised medicine through the means of nineteen bodies. Those bodies were partly universities throughout the kingdom, but they were also licensing corporations, such as the College of Surgeons, the College of Physicians, and the Apothecaries' Company. At present, through any of those bodies, medical men might go upon the Register and practise, and receive fifty or sixty titles to practise, and a bewildered public had no idea whether those titles signified an efficient qualification for a medical man. A surgeon might attend medical cases, such as measles and scarlatina, without having passed a medical examination at all; or a medical man might go and cut off a leg without having passed an examination in surgery. A surgeon might practise medicine, and a physician surgery, without knowing anything about midwifery. That was the state of the law, and it was a very bad state. In England the College of Physicians and the College of Surgeons had combined to have one qualifying examination both in medicine and surgery. That was a voluntary and not a statutory combination. In Scotland the same thing had been done; but in Ireland no combination had yet been effected. The leading principle of the Bill was this—no man in future could get upon the profession without a qualifying examination, which meant that a man must pass a thorough examination in medicine, surgery, and midwifery. The universities might, under this Bill, continue to give the qualifications they now bestowed, but the corporations, if they desired to form a qualifying combination, must combine together, so that the College of Surgeons would unite with the College of Physicians, and both give a qualifying examination over the area necessary for the medical profession. The Bill provided that the Medical Council, which was established in 1858, should have the power of adding a sufficient number of examiners in order that they might get a qualifying examination. By this Bill four popular representatives, two from England and one each from Scotland and Ireland, would be elected to the Council by the medical men themselves. The Medical Council would also have power to send inspectors to see that the examinations were sufficient and efficient, and if they found a body not doing its duty, they might, with the consent of the Privy Council, disqualify that body from giving qualifications. The Bill further provided that properly qualified colonial medical practitioners should be received on the Register, provided that there was reciprocity between ourselves and the colonies in this matter. He believed that the Bill would settle a long and vexed question, and would enable only those to get upon the Register who were qualified by education and examination in the three great branches of the medical profession.—Sir H. Holland expressed his regret that it had not been thought opportune to make a consolidation of the Acts.—Dr. Foster said that he supported the second reading on behalf of a large body of medical practitioners, but they did not support it so cordially as they would a larger measure of medical reform. For twenty-eight years they had been struggling to amend the Act of 1858; they had seen the failure of many attempts at legislation; and now they were naturally disappointed that the Bill was not wider in its provisions and more sweeping in its reform. For twenty-eight years the profession had been taxed to keep up a Council which had thwarted their desires, and now the representation that was given was inadequate. The three parts of the United Kingdom were disproportionately represented in the proposed Council, having regard to the medical population of each part. England, with 16,978 practitioners, was to have only two directly elected representatives; Scotland, with 2372, one representative; and Ireland, with 2501, one representative. England ought to have four and the other countries one each. Altogether, including the corporate bodies, as the Bill stood, Ireland would have seven and Scotland eight representatives out of the twenty-eight.—Dr. Farquharson said that he was of opinion that many of the charges which had been brought against the medical corporations, particularly in Scotland, had not been borne out by the facts. It was certainly an anomalous state of things that nineteen examining bodies should be allowed to compete for the right of conferring a qualification on a practitioner. He concurred generally with the remarks of the previous speaker as to the constitution of the General Medical Council. It had been a great grievance on the part of the medical profession that they had had no direct representation on this body. The Council might be cut down one-half with great advantage.—Sir H. Roscoe supported the second reading of the Bill. In one respect it had a distinct advantage over its predecessors. It did not suggest any cut-and-dried examination, but by the influence of the Medical Council it endeavoured to bring all the various medical examining boards into harmony, and to raise and establish a standard in each. He was pleased to find that the universities were to have a fair share of representation. It was important to bear in mind that it was teaching and not examination which created the medical man, and every advantage ought to be given to the university in which these subjects were taught according to the highest modern standpoint. While he was sure that the Bill would be received with great satisfaction, he felt that the medical profession was not so fully represented as it deserved to be.—Mr. Addison pointed out that under the present law any man could practise both medicine and surgery if he did not assume a qualification. The Bill before the House did not propose to deal with such a person, and therefore he considered it was defective.—Mr. Bryce ex-

pressed his belief that the Bill would receive the support of every member of the Commission which inquired into the subject a short time since. With regard to the remarks of Mr. Addison, he pointed out that the Bill did not propose to deal with such a case as that to which he had referred. The Government had not thought it wise to load the measure with such a controversial provision.—The Bill was then read a second time.

The Vaccination Laws.

On the 4th inst., Mr. Robinson asked the Secretary of State for the Home Department whether it was true that Charles Hawyard, mechanic, of Ashford, Kent, had been summoned before the magistrates of that town fourteen times within twelve months, and fined seven times by them for neglect to vaccinate oneand the same child; whether he would remit the seventh penalty of 20*s.* and 12*s.* costs imposed on April 13th; and whether he would lay upon the table of the House a letter, dated March 18th last, addressed to the Lord Chancellor by Mr. Baker, who was counsel in the case on the 13th summons, calling attention to the illegality of the proceedings. Mr. Childers, in reply, stated that, as far as any remission of penalty was concerned, he saw no reason to recommend the indulgence of the Crown in favour of any person who persistently refuses to comply with the law. He would ask the Lord Chancellor whether he had any objection to lay the letter referred to upon the table, but doubted whether his doing so would be in accordance with custom.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on April 29th:

Blacker, Edward Spencer, Brighton.
East, Charles Harry, L.S.A., Titering.
Hains, William Robert Hall, L.K.Q.C.P.I., Plymouth.
Hall, William George, L.S.A., Swindon.
Hubbard, Daniel Lovett, L.S.A., The Grove, Clapham.
Jones, George Burnett Mander, L.R.C.P. Lond., Sydney, N.S.W.
Leech, Arthur Herbert, L.S.A., Woolpit, Suffolk.
Morgan, James Campbell, L.R.C.P. Lond., Blackheath.
Noyes, Alexander Wellesley Finch, L.R.C.P. Lond., Melbourne.
Paine, William Henry, L.S.A., Lewisham.
Paul, George W. Frederic, L.R.C.P. Lond., Ladbroke-grove-road.
Pearson, George Kenneth, L.R.C.P. Lond., St. Peter's-park.
Reddall, Osborne Henry, L.R.C.P. Lond., Denmark-park.
Spiller, Walter Charles, M.B. Edin., Trinity-square.
Stubbs, Percy Belford Travers, L.S.A., Canonbury.

Admitted on April 30th:—

Alexander, Sidney Robert, L.S.A., Upper Norwood.
Anderson, Reginald Bean, L.S.A., Bodmin.
Dimmock, Augustus Frederick, L.S.A., Ely.
Druitt, Arthur Barthold, L.S.A., West Kensington-park.
Ellis, William McDonogh, L.R.C.P. Lond., Lee.
Evans, Charles Silvester, L.S.A., Fentiman-road.
Fletcher, Thomas Johnson, M.B., Northwich.
Gilbert, Clarence Edwin Lloyd, L.K.Q.C.P.I., Paddington.
Haydon, Hillyard William, L.S.A., Highgate.
Pope, Henry Alexander Lipthairia, L.S.A., Donegal.
Pugh, John Williamson, L.S.A., Llanon.
Simpson, George Augustus Garry, L.S.A., Warwick-road.
Toogood, Frederick Sherman, L.S.A., Southampton.
Wilson, John Robert, Caistow, Lincs.

Admitted on May 3rd:—

Buckland, Sydney Charles, Wimbledon-park.
Gage-Brown, Charles Herbert, M.B. Edin., Sloane-street.
Hildyard, Robert Loxham, L.S.A., Newcastle-on-Tyne.
Peake, Solomon, L.S.A., Coventry.
Potts, Walter Alfred Beevor, L.S.A., Amersham.
Shackleton, Thomas Francis, L.S.A., Catford Bridge.
Smith, Henry Craven, L.R.C.P. Lond., Torquay.
Sealy, Francis Marmaduke, L.S.A., Gosberton.
Turner, Henry Sweetman, Wandsworth-common.
Williams, David, L.S.A., Carmarthen.
Wright, Alfred John, L.S.A., Mackfield-terrace.

Admitted on May 4th:—

Baumgartner, Henry Spelman, L.S.A., Newcastle-on-Tyne.
Bullen, Frederick St. John, L.S.A., Dulwich-road.
Gaston, Harry Percival, L.S.A., Nettlebed.
Gaudin, Francis Neel, L.S.A., Staines.
Locke, George, L.S.A., Kingsland-road.
Lucy, Reginald Horace, M.B. Edin., Worcester.
Norris, Edwin John, L.R.C.P. Lond., St. Peter's-park.
Ozzard, Albert Tronson, Southsea.
Vernon, Arthur, L.S.A., Macaulay-road.
Wheatley, James, L.S.A., Huddersfield.

There were 265 candidates for this examination, of whom 90 obtained their diplomas; 72 were approved in Surgery, and when qualified in Medicine and Midwifery will be admitted Members; 35 candidates were referred for three months, 60 for six months, 4 for four months, and 4 for twelve months; 67 candidates, having previously passed in Surgery, and having passed in Medicine and Midwifery, were also admitted Members.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on April 29th the degree of M.D. was conferred on

Henry Roxburgh Fuller, Gonville and Caius.

And the degree of M.B. on

George Turner, non-collegiate.

UNIVERSITY OF DURHAM.—At the recent examination for certificates of proficiency in Sanitary Science, the following satisfied the examiners:—

Arnold, Ernest Charles, M.R.C.S.
Codd, Arthur Frederick Gambell, M.R.C.S.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the April sittings of the examiners the following candidates have been admitted Licentiates in Surgery:—

J. W. Kenrick, W. C. Leitch, Murdoch Mackenzie, and M. M. Williams, Glasgow Medical School; Joseph Robinson, Edinburgh Medical School; J. W. Lichfield, Charing-cross Hospital; Fred. Stephenson, Owens College; G. F. C. Gardiner, Bristol School.

The following candidates have been admitted Licentiates in Dental Surgery:—

Matthew H. Nisbet, Glasgow; J. Spotswood and F. Dale, Sheffield.

SOCIETY OF APOTHECARIES.—The following gentlemen passed the examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on April 29th:—

Gaudin, Francis Neel, Clydesdale, Staines.
Lewis, Philip King, Adelaide-road.
Wright, Alfred John, Markfield, Leicester.

ON the 3rd inst., a Fancy Fair was opened in aid of the funds of the North-West London Hospital, Kentish-town-road.

THE guardians of the Lewisham Union have been recommended by the Local Government Board to purchase land for building an infirmary.

BERLIN CHARITE HOSPITAL.—The building of the new clinic for children's diseases in connexion with the Charité Hospital in Berlin is about to be commenced.

THE Councils-General of the various French Departments have voted sums of money for the establishment of the proposed Pasteur Institute for the treatment of rabies.

THE death is announced of Dr. C. H. Huxtable, of Auckland, New Zealand, from the effects of chloroform which he had inhaled, as was his custom, for the purpose of procuring sleep.

AT a meeting held at Hastings on the 4th inst., it was reported that a sum sufficient to warrant the committee in formally taking over certain premises, which had been presented for the purpose, as a convalescent home, and opening them as such, had been received.

ON the 4th inst., Mr. D. E. Jones, L.R.C.P., F.R.C.S. Ed., Mayor of Cardiff, turned the first sod of the new series of great waterworks to be constructed in the Taff Valley, near Brecon Beacons, at a total cost of over £300,000.

TESTIMONIAL TO DR. TUCKWELL OF OXFORD.—On Wednesday, April 28th, at the Radcliffe Infirmary, a testimonial was presented to H. M. Tuckwell, M.D., F.R.C.P., by the medical men of Oxford and the surrounding district, together with a few of his old fellow-students and friends, teachers at St. Bartholomew's Hospital. The testimonial took the form of a very handsome gold minute repeater watch, with a choicely-bound presentation volume, containing a short address in the names of the seventy-three medical men who had subscribed. The address ran as follows:—"We,

the undersigned members of the medical profession, desrei to convey to Dr. Tuckwell an expression of the regard we have for him as a physician, whose generous and straightforward conduct has done much to elevate the tone of our profession. We wish to express our sincere regret at his retirement from practice, and more especially for the ailment which has necessitated his doing so. We beg his acceptance of this watch as a token of our esteem and sympathy."

WESTMINSTER HOSPITAL MEDICAL SCHOOL (Winter Session).—The following prizes have been awarded: Treasurer's Prize, Mr. L. Lewis; President's Prize, J. R. Plant; Prizes in Chemistry, L. Lewis and E. J. Pritchard; in Medicine, H. B. Brackenbury; in Surgery, C. Burt.

METROPOLITAN FREE HOSPITAL.—The Prince and Princess of Wales have consented to open the new building for the Metropolitan Free Hospital now approaching completion in the Kingsland-road. The ceremony will take place during the ensuing summer, at a date to be fixed by their Royal Highnesses.

ON the 17th and following two days, it is intended to hold at Prince's Hall, Piccadilly, a bazaar in aid of Morley House Workman's Seaside Convalescent Home. The sum needed to remove the debt on the purchase of the building is £1600, which amount it is confidently anticipated will be obtained.

TRICHINOSIS.—It is stated by a Bavarian medical journal that more than thirty persons have been attacked by trichinosis, in consequence of eating infected meat. In Wandsbeck also there has been an outbreak of the same disease, two persons having died of some thirty who have shown symptoms of trichinosis.

HOSPITAL SATURDAY FUND.—At a meeting of the board of delegates of this fund on the 1st inst., it was announced that the ladies' outdoor collection would be held on July 17th next, the third Saturday in the month, as last year the earlier time of the street collection and an increased number of collectors resulted in a large increase in the total amount realised.

OLD AGE IN ST. PETERSBURG POORHOUSE.—According to the *Novosti* a man has just died in the St. Petersburg poorhouse at the age of 122; he had been an inmate since 1818. He retained his senses to the last. Indeed, it was only about four years ago that he seemed to fail at all, having till then enjoyed excellent health. There is still living in the poorhouse a soldier's wife, who is shown by documentary evidence to be fully 110 years of age.

ST. JOHN AMBULANCE ASSOCIATION.—A course of ambulance lectures (first aid) for ladies was commenced in Sunderland some time ago, and has just been concluded. The class has been conducted by Mr. W. Percy Blumer, F.R.C.S. Edin., and has been attended by a very large number of ladies, who have so enthusiastically entered into the work that upwards of fifty will present themselves at the examination which is about to be held. At the close of the last meeting Mr. Percy Blumer was presented by the ladies with a case of eye instruments as a token of their respect and esteem and as an expression of their gratitude.

TEMPERANCE CONGRESS AT CROYDON.—This congress was opened on the 4th inst., when, after the inaugural address by Canon Ellison, Dr. Alfred Carpenter delivered an address, in the course of which he detailed the teachings of science as to the true chemical and physiological action of alcohol, and pointed out from authoritative statistics that those who abstained altogether suffered less from ill health and had longer lives than moderate drinkers. Dr. James Ridge read a paper entitled, "Is Total abstinence Reasonable?" and Dr. Norman Kerr followed with a paper on "What we know about Alcohol." Amongst the speakers in the evening was Dr. B. W. Richardson.

THE RECENT VISIT OF THE PRINCESS OF WALES TO TORQUAY.—In reply to a communication on the subject of the proposed public commemoration of her visit to Torquay, the Princess of Wales has stated that she is extremely gratified at this expression of goodwill on the part of the people of Torquay, and that if her own wishes were consulted she would like the memorial to take the form of a ward in the hospital, or of any movement which would prove generally beneficial to the people. Her Royal Highness, however, prefers that whatever is done should emanate from the inhabitants themselves, and that they should do what they consider will be best for the welfare of the town.

ROYAL INSTITUTION OF GREAT BRITAIN.—At the annual meeting of this institution, held on May 1st, the annual report of the Committee of Visitors for the year 1885 was read and adopted. The real and funded property now amounts to above £85,000, entirely derived from the contributions and donations of the members. Twenty-six new members paid their admission fees in 1885. Sixty-three lectures and nineteen evening discourses were delivered in 1885. The books and pamphlets presented in 1885 amounted to about 354 volumes, making, with 464 volumes (including periodicals bound) purchased by the managers, a total of 818 volumes added to the library in the year. The election of officers for the ensuing year terminated the proceedings.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following gentlemen have been elected Examiners for the ensuing year:—Anatomy and Comparative Anatomy: John Barton, F. A. Nixon, Wm. Thornley Stoker, and Robert L. Swan. Surgery and Surgical Pathology: Charles Ball, E. Stamer O'Grady, William Thomson, and Richard Francis Tobin. Physiology and Histology: E. Dillon Mapother and John A. Scott. Medicine and Therapeutics: M. A. Boyd and R. Hayes. Physics, Chemistry, and Medical Jurisprudence: J. D. Pratt and Samuel H. Webb. Materia Medica, Pharmacy, and Botany: P. C. Baxter and C. H. Robinson. Midwifery and Gynæcology: J. J. Cranny and Henry Croly. Ophthalmology: Arthur Benson and Henry R. Swanzy. Diploma in Midwifery: J. J. Cranny, S. Mason, and Wm. Roe. Preliminary Examination in General Education: F. Davys, Robert Morton, and H. C. Tweedy. Licence in Dentistry: A. W. Baker, Daniel Corbett, jun., Henry Gray Croly, R. Hazelton, Edward Stamer O'Grady, and Henry G. Sherlock.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

AGANOOR, M. S. P., M.B., C.M.Ed., has been appointed House-Surgeon to Gray's Hospital, Elgin, N.B.

CHILD, HERBERT, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Fourth District of the North Bierley Union, Yorks, vice J. H. Naylor, resigned.

GRAHAM, ARTHUR, L.R.C.P., M.R.C.S., has been appointed Third Attending Medical Officer to the Free Dispensary and Provident Medical Institution, Pimlico-road, vice T. H. Battye, M.D., &c., appointed Second Honorary Consulting Physician.

HIRD, THOMAS A., M.B., C.M.Ed., has been appointed Medical Officer for the First District of the Coventry Union.

MURRAY, JAMES, M.B., C.M.Aber., has been appointed Assistant Medical Officer to Murray's Royal Asylum, Perth.

ROBINSON, C. H., F.R.C.S.I., has been elected an Examiner in Materia Medica and Botany to the Royal College of Surgeons in Ireland.

ROBINSON, FREDERICK, L.R.C.P., L.M.Ed., has been appointed Medical Officer for the Eleventh (Thornhill) District of the Dewsbury Union.

ROWLEY, R. J. L., L.K.Q.C.P.I., has been appointed Medical Officer for the Penryn District of the Falmouth Union.

THOMSON, HENRY ALEXIS, M.B.Edin., M.R.C.S., has been appointed House-Physician to the Royal Hospital for Sick Children, Edinburgh.

TRATMAN, FRANK, M.B.Lond., M.R.C.S., L.R.C.P. (late House-Surgeon to the London Hospital), has been appointed Government Medical Officer for the Gascoyne District of Western Australia.

WATSON, THOMAS ALFRED, M.B., C.M.Edin., has been appointed Resident Medical Officer to the Rochdale Infirmary and Dispensary.

Births, Marriages, and Deaths.

BIRTHS.

BARKER.—On the 29th ult., at Harley-street, Cavendish-square, W., the wife of Arthur E. Barker, F.R.C.S., of a son.

CUFF.—On the 4th inst., at 22, Huntriss-row, Scarborough, the wife of Robert Cuff, M.B.Lond., of a son.

MURPHY.—On the 28th ult., at the Barracks, Tipperary, Ireland, the wife of P. H. S. Murphy, Surgeon, Army Medical Staff, of a son.

WEBSTER.—On the 28th ult., at Bewdley, the wife of Trevor Webster, M.R.C.S., of a son.

WILLIAMS.—On the 29th ult., at Rose Lawn, Kirkdale, Sydenham, the wife of Albert Williams, M.D., of a daughter.

WILSON.—On the 1st inst., at Sparrows Herne, Bushey, Herts, the wife of Daniel Wilson, M.D., of a daughter.

MARRIAGES.

DARLING—COLE.—On the 27th ult., at Innishannon Church, co. Cork, Quintin Richard Darling, L.R.C.S.I., &c., youngest son of the late Richard Sisson Darling, Esq., of Trinidad, to Letitia Victoria, elder daughter of the Rev. John Harding Cole, A.B., of Woodview, Innishannon, co. Cork.

FRASER—HODGSON.—On the 29th ult., at St. Mary's Church, Beverley, John Joynor Fraser, F.R.C.S.Ed., to Edith, fifth daughter of Colonel Hodgson, of Westwood Hall, Beverley.

GODDARD—SKELTON.—On the 5th inst., at St. John's Church, Wembley, by the Rev. Canon Francis Goddard, M.A., uncle of the bridegroom, assisted by the Rev. A. M. Maynard, B.A., Vicar, Charles Ernest Goddard, L.R.C.P.Lond., M.R.C.S.Eng., A.K.C.Lond., second son of the late Lieut. Colonel Goddard, of Kilburn, to Eleanor Lucy (Nelly), eldest daughter of Samuel Skelton, Esq., of Wembley Orchard, Middlesex.

IRVING—SOUTHEY.—On March 1st, at St. Thomas's Cathedral, Bombay, Surgeon-Major L. A. Irving, youngest son of the late Major-General Irving, C.B., R.A., to Ethel, youngest daughter of the late Colonel Southey, M.S.C.

JONES—CODD.—On the 29th ult., at Christ Church, North Brixton, by the Rev. Canon Hussey, D.D., F. Felix Jones, Surgeon, of Llanfyllin, North Wales, youngest son of the late Dr. Jones, of Llanfyllin, to Ada Louisa, second daughter of A. Codd, of Suffolk Lodge, Brixton.

MATTHEWS—GARLANT.—On the 28th ult., at St. Margaret's, Westminster, by the Ven. Archdeacon Farrar, D.D., Valentine Matthews, of 11, Suffolk-street, Pall-mall, to Maude, elder daughter of the late J. H. Garlant.

MAURICE—CROOME.—On the 29th ult., at St. Philip's, Kensington, William James Maurice, M.R.C.S., of Reading, to Frances Margaret, youngest daughter of the late Rev. Thomas Boys Croome, Rector of Siston, Gloucestershire.

MORITZ — WISE. — On the 5th inst., Siegmund Moritz, M.D., M.R.C.P.Lond., of 155, York-street, Cheetham, to Amelia (Milly), eldest daughter of Emanuel Wise, of York House, Cheetham, Manchester.

ORR—GRAHAM.—On the 30th ult., at Brighton-place, Govan-by-Glasgow, William Alexander Orr, M.B., C.M., eldest son of the late Rev. John Orr, of Kilbirnie, to Katherine Harrison, only daughter of the late Rev. William Graham, of Lochwinnoch.

POOLER—JOHNS.—On the 26th ult., at St. Nicholas' Church, Carrickfergus, by the Rev. Canon Pooler, D.D., father of the bridegroom, assisted by the Rev. Lewis A. Pooler, brother of the bridegroom, Edward Leslie Pooler, M.D., of Newtownards, to Emma Margaret, only daughter of Alexander Johns, of Sunnylands, Carrickfergus.

QUILL—GUNN.—On the 28th ult., at St. Peter's Church, Rochester, Surgeon-Major R. H. Quill, M.D., Army Medical Staff, eldest son of the late Jerome Quill, Esq., J.P., co. Kerry, to Marion M., only daughter of William M. Gunn, M.D., Deputy Inspector-General, Royal Navy.

SHAW—CAVE.—On the 29th ult., at the Parish Church, Kingston-on-Thames, Surrey, Harry Charles Costello Shaw, L.R.C.P.Lond., M.R.C.S., eldest son of F. G. Shaw, Esq., H.M.I.S., of Shedden Hill, Ootacamund, Madras, and Heathburn Hall, co. Cork, to Annie, second daughter of E. J. Cave, Esq., of Norbiton Hall, Surrey.

SKIPPER—GAZE.—On the 29th ult., at St. Augustin's, Highbury New-park, Edward Skipper, M.D., of Tollington-park, N., to Emily Elizabeth, elder daughter of Robert Gaze, Esq., of Mundesley House, Highbury New-park.

SMITH—SHEPPARD.—On the 27th ult., at Holy Trinity Church, Paddington, Herbert A. Smith, M.R.C.S., L.R.C.P., L.S.A.Lond., of Ealing, second son of the late Thomas Smith, Surgeon, of Wheatley, to Myra Dixon Sheppard, eldest daughter of W. Sheppard, Surgeon, of Ealing (formerly of Ashford).

DEATHS

CALDWELL.—On the 27th ult. (from paralysis), Joseph Caldwell, R. Staff Surgeon, R.N., M.R.C.S.

CHAWNER.—On the 3rd inst., at Clay-cross, Derbyshire, Emily Sophia Laird, the beloved wife of Alfred Chawner, L.R.C.P.Lond., M.R.C.S., and daughter of William Clowes, Esq., of 86, Holland-road, Kensington (Chancery Registrar), aged 28.

CUMMING.—On the 27th ult., at Ainslie-place, Edinburgh, William Cumming, M.D., F.R.C.P.E., aged 74.

GARDINER.—On the 21st ult., Arthur Gardiner, M.D., M.R.C.S., of London, late of Belfast and Dublin, aged 68.

MUDGE.—On the 3rd inst., at Middleham House, Ringmer, Sussex, John William Mudge, M.D., Deputy Inspector-General of Hospitals, late of H.M.'s Indian Army, Madras, J.P. for Essex, aged 69.

STEELE.—On the 23rd ult., at Blomfield-road, Maida-vale, London, James Dickson Steele, L.F.P.S.Glas., &c., aged 44.

THOMPSON.—On the 5th inst., at Matheson-road, West Kensington, W., James Thompson, M.D. (formerly of Avenue House, Leamington).

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

Medical Diary for the ensuing Week.

Monday, May 10.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesdays, same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.
SOCIETY OF ARTS.—8 P.M. Dr. B. W. Richardson: Animal Mechanics (Cantor Lecture).

Tuesday, May 11.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 and Thursdays at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Prof. Arthur Gamgee: The Function of Circulation.
SOCIETY OF ARTS.—8 P.M. Mr. Ernest Hart: Japanese Art Work.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Messrs. Ballance and Edmunds: The Ligature of the Larger Arteries in their Continuity, an Experimental Inquiry.—Mr. Jonathan Hutchinson: Congenital Absence of Hair, with Atropic condition of the Skin and its Appendages, in a Boy whose mother had been almost wholly bald from alopecia areata from the age of six. A series of Microscopic Specimens illustrating the first paper will be on view at 8 P.M.
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8.30 P.M. Mr. Francis Galton: Notes on Permanent Colour-Types in Mosaic.—Prof. Flower: Exhibition of a Nicobarese Skull.—Prof. Macalister: (1) On some African Skulls in the Cambridge University Museum; (2) On a New Ireland Skull.

Wednesday, May 12.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesdays and Thursdays, 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Skin Department, Tuesdays and Fridays, 9.30 A.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; and on Friday, 2 P.M.; and Saturday, 1 P.M.
EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Dr. Buchanan: Certain Alleged Injuries by Vaccination in North Germany.—Dr. Longstaff: Statistics of Hydrophobia in England.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Dr. G. M. Sternberg: Micrococcus Pasteuri (Sternberg).—Mr. F. H. Evans: Photo-micrography by the Woodbury Type Process.—Mr. C. D. Ahrens: New Polarising Prism.
SOCIETY OF ARTS.—8 P.M. Mr. J. W. Bund Willis-Bund: The Proposed Fishery Board.
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens will be shown by Drs. Mansell-Moullin, Fenton-Jones, and others.—Dr. Arthur Edis: Serous Peritonitis.

Thursday, May 13.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Surgical Consultations, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Prof. Dewar: The Alkaloids.
PARKES MUSEUM OF HYGIENE.—8 P.M. Mr. R. Warrington: Recent Investigations on Well Waters.
SOCIETY OF ARTS.—8 P.M. Prof. R. Meldola: The Scientific Development of the Coal Tar Colour Industry.

Friday, May 14.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1.30 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB.—7.30 P.M. Exhibition of Micro-photographs with the Lantern, by Mr. F. H. Evans, in the Mathematical Theatre.
CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Churton (Leeds): Aortic Aneurysm (arch); galvano-puncture five years ago; formation of subcutaneous outgrowths (recent); galvano-puncture; death twenty minutes after last puncture from rupture of first aneurysm into bronchus; soft clot only in sac.—Dr. Carrington: A case of Rheumatic Hyperpyrexia.—Dr. Percy Kidd: Aneurysm of the Aorta; extravasation of blood into the posterior mediastinum, compressing the œsophagus and vagus nerves, and rupture into the abdominal cavity, associated during life with frequent vomiting.—Mr. Pickering Pick: Impaction of Stone in one Ureter, Atrophy of the Kidney of the opposite side.
ROYAL INSTITUTION OF GREAT BRITAIN.—9 P.M. Prof. John Millar Thomson: Suspended Crystallisation.

Saturday, May 15.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Prof. Ernst Pauer: How to Form a Judgment on Musical Works.
SOCIETY OF ARTS.—3 P.M. Prof. George Forbes: Electricity.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 6th, 1886.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Apr. 30	30·14	E.	41	37	97	55	36	·01	Cloudy
May 1	30·25	E.	44	39	96	61	36	...	Fine
,, 2	30·39	N.E.	51	45	99	57	37	...	Fine
,, 3	30·43	S.E.	50	45	100	65	41	...	Hazy
,, 4	30·45	S.W.	52	47	107	69	42	...	Hazy
,, 5	30·50	E.	53	46	102	73	45	...	Hazy
,, 6	30·37	W.	60	50	...	...	50	...	Fine

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

BONE-SETTERS AND THE PROFESSION.

THE *Hexham Courant* lately published a letter in which the writer praised bone-setters and the work they did, concluding by lauding a medical gentleman of the neighbourhood, who not only tolerates the bone-setter, but assists and co-operates with him. This is a little further than we can go. It is not necessary for us to deny that bone-setters have occasionally been of use—from their very ignorance, perhaps. If persons with injured bones think fit to go to them rather than to those who know something about the joints, be it so. But a medical man is mistaken when assisting and abetting a bone-setter.

Merpath.—We can only refer our correspondent to the Act, 7 & 8 Vict., c. 15, s. 8, or to the Medical Directory, which contains a summary of the duties of the office.

C. L.—The letter is too long for insertion.

AN INCIDENT IN A CASE OF DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—In reference to diphtheria the following occurrence may be of interest.

We have had a rather serious epidemic in an adjoining village, with some very sudden deaths. In the family I am writing about the baby died after less than twelve hours' illness. Two days after three of the other children were attacked; but after some weeks of treatment they all recovered. One of them (James W——, a boy of about eighteen years) went out of doors, and next day was in bed suffering from a sub-acute pneumonic bronchitis. One day he complained of pain and tightness in the left side, and on coughing a few times he exclaimed, "Mother, it is gone," at the same time spitting up what I now send you in the bottle. I have not examined it, but put it into a solution of carbolic acid, as when I got it in the evening it was far from savoury. This was ejected about three weeks ago. The lad showed a tendency to phthisis, but has been gaining strength and flesh lately. I am indebted to my senior partner, Dr. W. S. Gervis, for a good deal of the above information, he having chiefly attended the lad. Will you please examine and report on the specimen, and oblige,

Yours truly,

Ashburton, Devon, April 15th, 1886. WILLIAM FRASER, M.B.Dub.

*** The cylindrical mass, measuring about two inches long and one-third of an inch in thickness, and one inch in circumference, was found on examination to consist of a coagulum, in which were thickly embedded oil globules, swollen epithelial cells, a few partially digested muscular fibres, and remnants of vegetable tissue. These characters suffice to demonstrate its true nature, which is not a morbid product, but a mass of partially digested food, mainly milk.—ED. L.

SPANISH MEDICINE.

DON LUIS COMENGE has recently published a Spanish work, entitled "Medical Curiosities, preceded by a Discourse on the Flourishing Condition of Spanish Medicine in the Sixteenth Century and its Subsequent Decadence." Though entitled "Curiosities," there is much serious medical history which, as a reviewer in *El Genio Medico Quirurgico* says, deserves to be read and pondered over, such as descriptions of those who have contributed in past ages to the advancement of medical knowledge, and accounts of their doctrines and works. One chapter is devoted to the history of variolous inoculation, which was commenced in Spain by Dr. O. Scanlan, and a parallel is drawn from the arguments of the anti-inoculationists of those days and the anti-vaccinationists of the present time, together with the opponents of Ferran's anti-cholera inoculations. With regard to decadence of Spanish medicine since the sixteenth century, the reviewer referred to remarks: "Until instruction undergoes a complete change, we shall not advance a step in the direction of progress. Medicine has for some years been in the stage of pure experimentalism, and we Spaniards experiment but little or not at all. In the professoriate there are, it is true, many men of profound knowledge, who are an honour to contemporary medicine; but there are still others who talk to their students about the pathogenetic importance of phlegm, and lecture on typhus, cholera, and other infectious diseases just as teachers at the commencement of this century might have done." With such elements in the professorial staffs, the author and reviewer agree that but little progress is to be hoped for.

R. L., M.D.—We have explained our position, and must decline to open our columns to a discussion of the facts, or fictions, of religious belief.

Simon G.—The coroner has absolute discretion in such a case. Our correspondent does not state the circumstances in which A handed the case over to B.

SEA-SICKNESS.

To the Editor of THE LANCET.

SIR,—Having had some sea experience within the last few years, I would fain join the multitude who have something to say on the vexed question of sea-sickness.

First, then, I want to insist that sea-sickness is simply a form of migraine which is caused by jarring of certain medullary centres and of the membranous semicircular canals by a peculiar external motion. Considered from this point of view, many symptoms which otherwise seem inexplicable are easily accounted for, and its treatment may be rationally conducted very successfully. The sea migrainal-nerve disturbance principally affects the liver chologenetically, but it also increases the secretion of saliva and gastric mucus. The quantity of bile secreted in each individual case is at first very large; but as the case becomes chronic, it is naturally lessened, the secreting cells becoming exhausted. Hence the congested, jaundiced eyes, the bile-stained urine, the bilious vomiting and occasional bilious diarrhœa, in cases of *mal de mer*. The distressing paroxysms of qualmishness are caused principally by the regurgitation of bile into the stomach, and are invariably relieved by emesis. Just before the emesis of bile takes place the heart's action often becomes irregular and depressed. I have seen a lady nearly dead from cardiac failure in sea-sickness. The cause of this, probably, is as follows. The gastric nerve-endings of the pneumogastric, if I may so speak, become irritated by the regurgitated bile, thereby causing cardiac reflex inhibition through the inhibitory branches of the same nerve.

Now, as to treatment. All the much-vaunted specifics, such as bromides, &c., are worse than useless. Common-sense treatment which is palliative I have found answers admirably. First, let the patient lie down on his (or her) right side, with the head low. This has a twofold effect. It relieves the irregular tensive action of the semicircular canals, and to a great extent prevents regurgitation of bile into the stomach. The sufferer should abstain from stimulants, except with food, as the blood is already loaded with bile excreta. A little effervescent citrate with hydrocyanic acid may be taken occasionally (the latter only if the pulse be not depressed, as it has itself a cardio-inhibitory action). If there be much cardiac depression, a minute hypodermic injection of atropia will be found useful. The dry-food *régime*, so popularly believed in, is probably a mistake, as the stomach rejects such food before the assimilation of any of it can have taken place. A bowl of plain soup, a little dry toast, and a glass of port wine taken quickly in the position recommended will often be found successful. If that fail, iced chicken jelly and a glass of iced champagne will frequently be retained. The patient, it is needless to state, should have plenty of fresh air.

I am, Sir, yours truly.

China. M.D. SURGEON, R.N.

EPISTAXIS.

To the Editor of THE LANCET.

SIR,—A young gentleman (a farmer), otherwise apparently in perfect health, suffers great inconvenience from epistaxis, occurring almost every morning and during the day on the slightest irritation to the nose, which is somewhat painful in frosty weather. I have tried every remedy I know of in vain, and shall be very thankful for any suggestions as to treatment. I am, Sir, yours faithfully,

St. Mary Cray, Kent, May 3rd, 1886. ALEX. SHANNON.

DIGITALINE.

M. LAPON, having examined various specimens sold under the name of digitaline, finds that a number of these occurring in commerce in France, both as amorphous and crystalline powders, are innocent of even a trace of the alkaloid, but M. Nativelle's digitaline, though amorphous and yellow, is, chemically speaking, identical with Merck's digitoxine.

Dr. Waldemar-Marian Phillipowitch (Odessa).—We regret we are unable to comply with the request of our correspondent.

Dr. Vasity (Bucharest).—We cannot extend our exchange list.

F. A. W.—We do not give medical advice.

HYDROPHOBIA: FRESH SUGGESTIONS.

To the Editor of THE LANCET.

SIR,—At the present time, when the greatest minds of the medical and scientific world are likely to be in a special manner directed to the problem of successfully dealing with hydrophobia, we have good reason to hope that something of real, lasting, practical benefit to suffering humanity will be the result of their investigations. I confess to a sanguine expectation that the method of treatment suggested and adopted by M. Pasteur will be found ultimately to succeed; and if such should be the case, we shall all ere long no doubt be placed in a position enabling us to "Go, and do likewise." Meanwhile, this method must be looked upon as being *sub judice*, and while it so remains it behoves each and all of us to exercise our best knowledge and judgment in such a matter, seeing that from the unusual prevalence of the disease in many parts, it is not unlikely we may have to deal with it. Fortunately for us in these northern parts, hydrophobia is of so rare occurrence as to be almost unknown (a single case has not been seen by my senior principal, Dr. Manson, in the course of a busy practice extending over fifty years); but in order to be prepared, should an undoubted case of rabid poisoning present itself, I have resolved upon the following line of treatment.

Local Treatment.—Locally, if seen on the instant, and if possible, complete arrest of circulation in the part by a tight ligature above the wound. After ligature and careful washing, as speedily as possible freeze a circle of skin at some distance from the wound by means of Richardson's ether spray, and, if practicable, excise the part, encouraging hæmorrhage to a judicious degree. When the wound is situated in a part where the application of a ligature would be impossible, a thin-edged tumbler, or other similar contrivance wide enough to include the wound, and firmly pressed down, would serve the purpose of arresting the circulation. The skin might then be frozen around the outer edge of the tumbler, and excision effected. The effect of the ether spray, besides anæsthetising the part for the knife, I presume, would be to interfere with the activity of the absorbents, and so delay general infection. After excision, I propose making a thorough application to the wound of a strong solution of chloride of zinc (℈ii. to ℥i.), which is capable of permeating the tissues for a considerable depth, and is well known for the property it has in rendering wounds incapable of putrefaction for several days, even when in contact with septic material. Should excision of the part prove impracticable, reliance should be placed on the other measures—viz., arrest of circulation by the means above stated, thorough washing of the wound, freezing of the surrounding parts, encouragement of bleeding (by cupping-glasses, &c.), and the subsequent use of chloride of zinc.

General Treatment.—In view of the fact that profuse secretion of a very viscid saliva constitutes a prominent symptom of hydrophobia, with the fact that it contains an abundance of the virus, and the probability that it is the only secretion that does contain it, it has frequently suggested itself to my mind that pilocarpine (from its very decided influence on the salivary secretion) might reasonably be conceived capable of eliminating the virus in the undeveloped disease, by imitating in its action what appears to be the chief effort of nature to rid itself in the developed disease. I suggest that it should be administered by the hypodermic method, and that its physiological effects be kept up for a period of forty-eight hours, or longer, immediately succeeding inoculation. The diaphoretic action of the drug (probably also beneficial) might be increased by the ordinary vapour or blanket bath, with the free use of diluents. In the treatment of the developed disease I would adopt the general measures as above stated, hoping thereby to assist the natural efforts at elimination of the poison, and so tend to the relief of symptoms by removal of the cause. In addition I should depend on bromide of potassium and chloral hydrate as sedatives—bromide of potassium, from its undoubted action in lessening the irritability of sensory nerves, being, I think, particularly indicated.

I am, Sir, yours faithfully,

Banff, April 14th, 1886. JAMES BREMNER, M.B., C.M.

TREATMENT OF GONORRHŒA CHRONICA BY MEANS OF GROOVED BOUGIES.

To the Editor of THE LANCET.

SIR,—Referring to the letter of Dr. Atkinson in your issue of April 17th, page 769, I beg to state that there is no doubt that some cases have been cured by injections applied by a suitable catheter. But, on the other hand, I accept Dr. Atkinson's confirmation that many cases of healing have taken place with my grooved bougies. This is all I asserted. Some cases are better for one method, others for the other.

I am, Sir, your obedient servant,

Berlin, May 2nd, 1886. DR. LEOPOLD CASPER.

UNQUALIFIED MASSEUSES IN VIENNA.

A VIENNA medical journal complains bitterly of the patronage afforded to quackery in the form of massage by medical men of the highest position—professors, lecturers, and others—who assist in setting up their female relatives or servants in business for themselves as *masseuses*. Massage is not a treatment which can safely be trusted to a lay person. It requires a knowledge not only of normal anatomy, but of the nature and course of the disease from which the patient is suffering. As these persons frequently practise without reference to a medical man, it is not surprising that they sometimes go on "massiring" a malignant tumour or a case of tuberculous periostitis for weeks or months, and so do a great deal of harm. "It is a great pity," continues the journal referred to, "that people have taken it into their heads that it is undignified for a physician to practise massage. Men like Mosengeil in Bonn, Busch in Berlin, Bergmann in Stockholm, Johnsohn in Copenhagen, &c., have not been above practising massage. It is greatly to be desired that the medical authorities may see their way, in the interest of the suffering public, to bring this new form of quackery within narrower bounds."

Medicus.—Witnesses are not generally paid for evidence before a Select Committee.

SEVERE CASE OF URTICARIA.

To the Editor of THE LANCET.

SIR,—The following case may be of sufficient interest for insertion in your journal.

R. B——, a man about forty years of age, came to me a week or two ago, complaining of an acute swelling about the groin and penis. On examination, I found the penis very much swollen, and presenting a condition of phimosis. The cellular tissue of the scrotum was also largely infiltrated with serum. The groin on both sides and the upper part of both thighs presented a brawny, erysipelatous appearance, with the skin tight and angry-looking—indeed, at first sight the whole appearance seemed alarming. The other parts of the thighs were more or less covered with wheals and an erythematous rash, as were also the front of the abdomen and the loins. The rash and wheals did not extend above beyond the level of the umbilical line, nor below beyond the chest, legs, and arms presenting no abnormal appearance. He had a furred tongue, and a quick, full pulse; the temperature was about 100°. It was evidently a case of urticaria, and to all appearance a very severe one. Within twenty-four hours, after complete rest in bed, the administration of a five-grain pill of colocynth and hyoscyamus, and an alkaline mixture, with light diet, the whole thing had cleared away. The patient had partaken very freely of mackerel at supper the previous night.

The peculiarities of the case appear to me to be the localisation of the rash and swelling, its alarming appearance, and the rapid subsidence of the severer signs. I have in my description rather understated the general appearance and the extent of the swelling. The patient had been the subject of acne vulgaris; and I would say in connexion with this that I have noticed that all, or nearly all, patients who suffer from medicinal rashes, or rashes produced by errors of diet or chill, are, or have been, the subjects of acne of sufficiently severe character to leave a few pits or scars as evidence of its past severity. I have lately seen the iodide rash in a lad of eighteen, and a slight rash from atropine (1/15-gr. hypodermically) in a woman about forty. The former had severe acne at the time, and the latter showed old scars of it on the shoulders. The woman, as a result of the dose of atropine mentioned, also suffered from marked delirium and dimness of sight, with some dilatation of the pupils, but had no thirst or dryness of the fauces.) I think the consideration is worth noting, as no doubt the subjects of *severe* acne must at all times suffer from a certain mal-assimilation of food, with an accompanying deterioration of the quality of the blood; therefore I shall in future advise such subjects to be careful in their diet, and be careful myself in the administration to them of certain drugs.

Believe me, Sir, your obedient servant,

Pangbourne, Reading, May 1st, 1886. W. T. FREEMAN.

A RUSSIAN VIEW OF THE BERLIN M.D.

THE Berlin correspondent of a Russian medical journal makes merry over the mediævalism still lingering in Prussian universities, and especially over the ceremony of the disputation for the doctor's degree, with the dean in his red robes merely playing propriety with classical Latin phrases, and the candidate with his three "friend opponents," who have settled with him about the subjects to be discussed beforehand. All this, says the correspondent, is very different from the procedure in Russia, where there are no traditions handed down from the Middle Ages to be attended to, and the professors are much stricter about allowing candidates to pass, besides which, the young aspirant has, instead of friendly opponents as youthful as himself, masters of the art of wrangling to contend against. Altogether, the writer seems to think it hard that the title of Doctor can be obtained on so much easier terms abroad than in Russia. Comparisons are proverbially odious. It would be instructive to see what Berlin graduates acquainted with the proceedings at Russian universities have to reply to the criticisms of their Russian visitor.

L.S.A.—So far as we are aware, registration only is required

PREVALENCE OF ANEURYSM AMONGST FOREIGN RESIDENTS IN CHINA AND JAPAN.

AT a recent meeting of the Sei-I-Kwai, Dr. Eldridge, in reporting a case of aneurysm, called attention to the fact that, for some reason as yet unexplained, residents of European blood in the Chinese and Japanese ports are perhaps more subject to this disease than are any other people on earth. In Yokohama, during seven years, aneurysm ranked fourth amongst the causes of death, every case included in the return being undoubted, and nearly all submitted to post-mortem examination.

A Student has not enclosed his card.

Mr. Cuthbie is thanked.

"KISSING THE BOOK."

To the Editor of THE LANCET.

SIR,—As all medical men who do not belong to the Society of Friends are expected when giving evidence in England to kiss the Bible, I would suggest that when taking the oath they should simply apply the thumb which holds the Bible to their lips, and not the Bible itself; or they might only bring the Bible within an inch or two of the mouth. The former method, for obvious reasons, is preferable. I may state that the Scotch oath is administered by the judge, the witness holding up his right hand and repeating the words of the oath after him. Dr. Gresham therefore need not cross the Atlantic to take a leaf from our American cousins' book.

I am, Sir, yours truly,

May 3rd, 1886. DANIEL MOWAT, M.B., C.M.

SKIN GRAFTING FROM THE FROG.

Inquirer.—So far as we know, the practice of skin grafting from the frog was first practised in this country by Dr. William Allen of Leadgate, Durham. See his letter in THE LANCET of Nov. 15th, 1884, p. 875.

Dr. John Roberts.—We agree with our correspondent, and shall be prepared to support the amendment he refers to. We should be glad to publish a letter from him on the subject.

A Constant Reader.—Roscoe.

"THE SUPPLY OF THE PROFESSION."

To the Editor of THE LANCET.

SIR,—In the list of medical schools with more than twenty entries published in your journal of last week, I beg to point out that you have omitted the Middlesex Hospital.

I remain, Sir, your obedient servant,

W. CAYLEY,

May 5th, 1886. Treasurer, Middlesex Hospital School of Medicine.

*** The figures are those officially given in the Register of Medical Students, and they do not in every case correspond with the actual number of entries, since many students are registered prior to joining a school.—ED. L.

THE MORPHIA HABIT.

To the Editor of THE LANCET.

SIR,—Could any of your readers give me any information that would prove of use in the following case?

A lady about sixty years of age has taken morphia (1 in 25) hypodermically for some years. During twenty-four hours she will have five or six injections, varying from three to five minims, and occasionally to eight minims. She is now very anxious to give it up, as the forearms and some distance above the elbow are a dense cicatrix, and an eczematous condition of both hands is developing. Would cocaine be useful? Any suggestions would be gladly received by,

Yours obediently,

May 4th, 1886. YOUNG PRACTITIONER.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Moxon, London; Dr. Wiglesworth, Rainhill; Dr. L. Casper, Berlin; Dr. J. Morton, Glasgow; Mr. Buckston Browne, London; Dr. Campell Pope, London; Dr. A. Black, Edinburgh; Mr. Sell, London; Mr. W. Tebb, London; Dr. D. Mowat, Leytonstone; Dr. Cayley; Mr. Anderson Critchett, London; Dr. H. J. Hardwicke, Sheffield; Mr. E. H. Brown, Birchington; Mr. Leeming, Kendal; Mr. Godlee, London; Mr. Kendal Franks, Dublin; Mr. Collier, Oxford; Mr. A. J. Harvey, London; Mr. T. A. Buck, Ryde; Dr. W. B. Dawson, London; Dr. Glanville, London; Mr. J. T. Williams, Oxford; Mr. P. B. Mason, Burton-on-Trent; Mr. T. A. Jones, Tircaradoc; Mr. Habgood, London; Dr. G. C. Roy, Burdwan; Dr. Phillipowitch, Odessa; Mr. Sharman, St. Mary Cray; Mr. Manby, East Rudham; Dr. Gowers, London; Mr. Ogier Ward, Tottenham; Mr. R. N. Jones, Swansea; Messrs. Oppenheimer Bros., London; Dr. Lewin; Dr. W. Allen, Leadgate; Mr. W. Pash, London; Dr. Buck, London; Dr. Althaus, London; Mr. P. Blumer, Sunderland; Mr. Freeman, Pangbourne; Mr. Jones, Chester; Mr. S. Snell, Sheffield; Mr. Mainwaring, Kensington; Messrs. Sumner and Co., Liverpool; Dr. Seaton, Sunbury; Dr. Smith; Messrs. Hall and English, Birmingham; Mr. Vrizenken, Vienna; Messrs. Squire and Sons, London; Lieutenant Beresford, Gosport; Mr. Elliott, Ottery St. Mary; Mr. Fisher, Millport; Dr. Prieger, Ausney; Messrs. Griffin and Co., London; Mrs. Sullivan, Burton-on-Trent; Mrs. Chustman, Eastbourne; Dr. Hassall, San Remo; Mr. Davis, London; Mrs. Carless, Liverpool; Mr. Manton, Marylebone-road; Messrs. Zimmermann and Co., London; Messrs. Leader and Sons, Sheffield; Messrs. King and Co., Lancaster; Mr. Stenhouse, Glasgow; Messrs. Maclachlan and Co., Edinburgh; Mr. Ubberton, Newton-le-Willows; Mr. Griffiths, Bristol; Mr. Ellis, Scarborough; Mr. Clark, Margate; Mr. Barnett, Weston-super-Mare; Mr. Rainer, Ipswich; Mr. Carter, Liverpool; Mr. Collins, London; Mr. Samuel, Manchester; Mr. P. A. Thomas, Liverpool; Simon G.; Morpeth; Philo-Nicotianus; Only a Country Doctor; Bis dat qui citò dat; F.; M.D., Edmonton.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Evelyn, Amoy; Mr. Kinder, Leicester; Mr. Cramond; Mr. Briggs, Bishop Auckland; Mr. Rowley, Barnsley; Dr. Eberle, Thirsk; Dr. Lapage, Nantwich; Mr. Booth, Chester; Mr. Whyte; Mr. Byrt, Shepton Mallet; Mrs. Morgan, Cleveland; Mr. Draper; Mrs. Johns, Carrickfergus; Mr. Allis, Blackburn; Mr. Ashworth; Mr. Bramwell, Stafford; Mr. Watson, Norwich; Mr. Mason, London; Mr. Godfrey, Northampton; Dr. Oldham, Manchester; Mr. Furris, Cumberland; Mr. McGill, Littleboro'; Dr. Bowes, Oldham; Dr. Armstrong, South Shields; Mr. White, Bayswater; Mrs. Newman, Bowness; Mr. Girling, Birmingham; Mr. Maugan, Kensington; Messrs. Hunton and Bolsover, Stockton-on-Tees; Mr. Brewster, Bootle; Dr. Chawner, Clay Cross; Dr. Ems, Eastbourne; Mr. Lake, Boston; Mr. Buckley, Stonehouse; Mr. Godder, Wembly; Dr. James, Pentre; Mr. Arnold, Cheetham; Dr. Creed, Greenwich; Mr. Peyton; Mrs. Hitch, St. Leonards; Medicus, Ripley; Peisto, Exeter; Medicus, Leicester; Medicus, Notts; M.D.; Medicus, Deal; W. C., Kentish Town; M.D., Southport; A., Portobello; Tenax, Brixham; H. F., Hull; Medicus, Battersea; A. B.; Opportunity; M.R.C.S., Hants; Beta; Surgery, Ipswich; Homo, Plymouth.

Herald of Health, Zoophilist, Cape Argus, Telegraphist, Whitehall Review, Imperial Federation, &c., have been received.

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